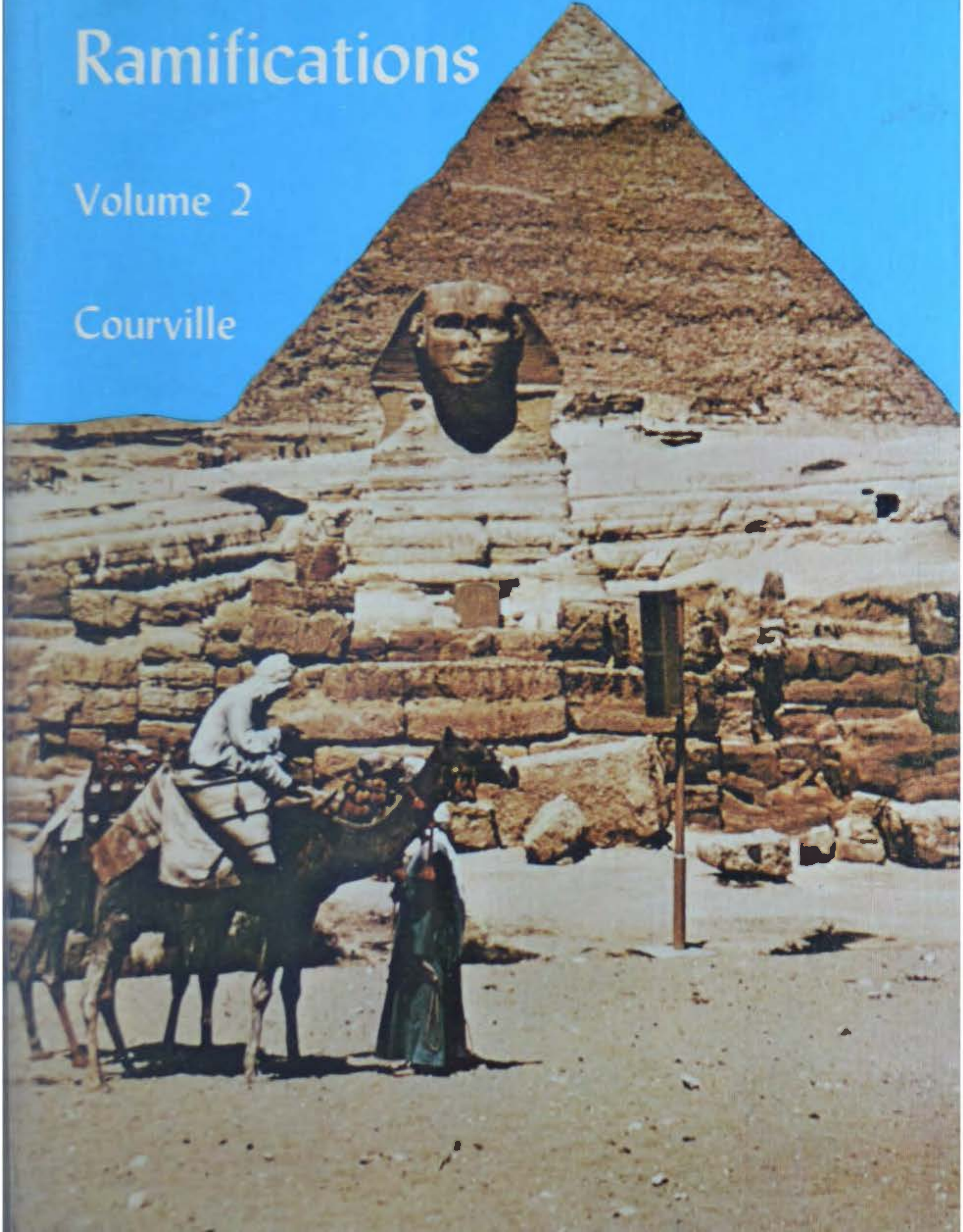
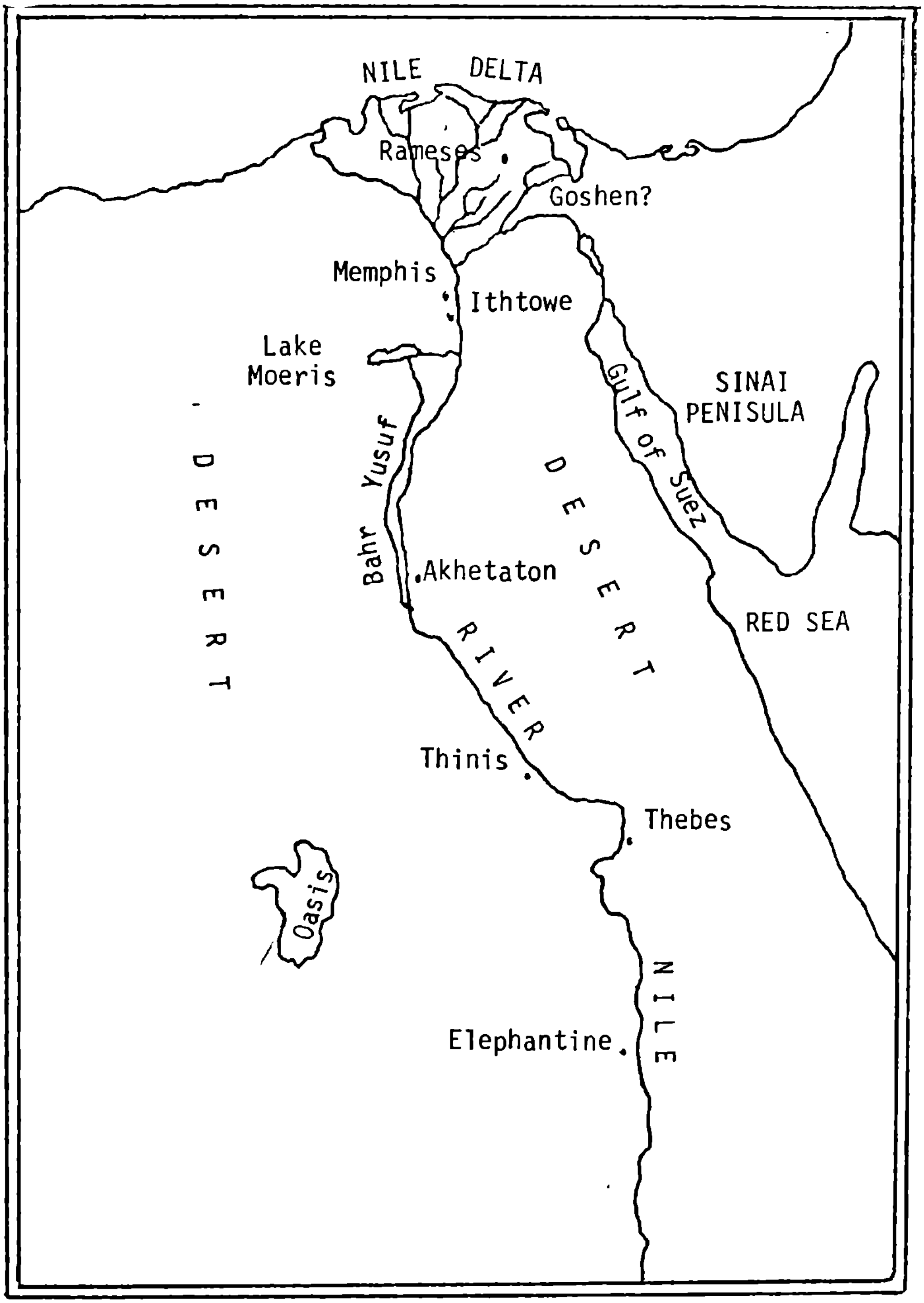
THE EXODUS PROBLEM and its Ramifications

Volume 2

Courville



THE NILE VALLEY



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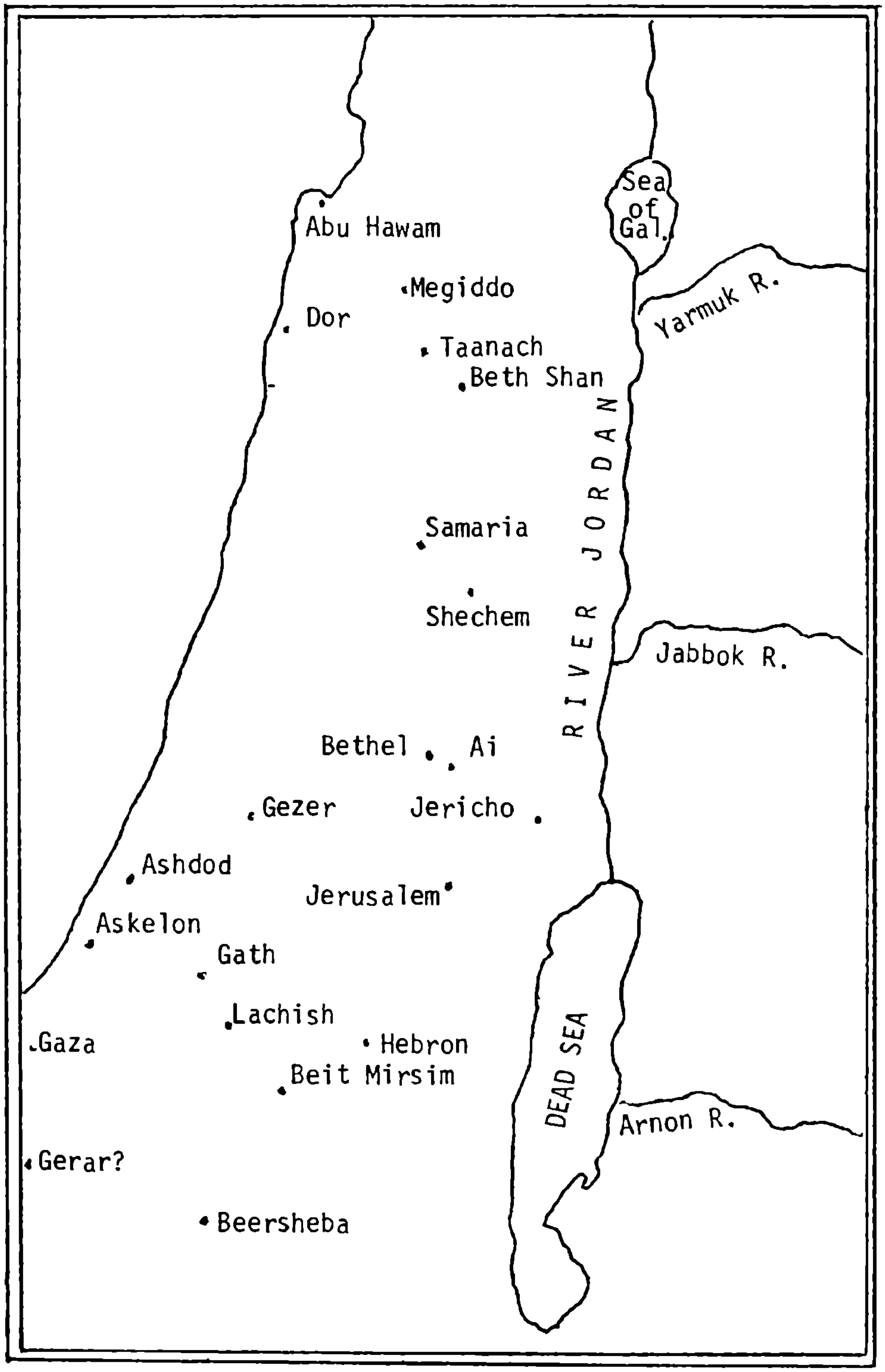
Sea of Gal.
Abu Hawam
Megiddo
Dor
Yarmuk R.
Taanach
Beth Shan
RIVER JORDAN
Samaria
Shechem
Jabbok R.
Bethel
Ai
Gezer
Jericho
Ashdod
Jerusalem
Askelon
Gath
Lachish
Gaza
Hebron
Beit Mirsim
DEAD SEA
Arnon R.
Gerar?
Beersheba

THE EXODUS PROBLEM and its Ramifications

A Critical Examination of the Chronological Relationships
Between Israel and the Contemporary
Peoples of Antiquity

by

Donovan A. Courville

37 Chapters
16 Chronological Charts
34 Tables
7 Plates
3 Maps
More than 700 pages

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ABBREVIATIONS TO REFERENCES CITED

A-AP	Albright, W. F., *The Archaeology of Palestine.* Penguin Books, 1960.
AASOR	*Annual of the American Schools of Oriental Research.*
A-RDBL	Albright, W. F., *Recent Discoveries in Bible Lands.* Supplement to Young's Analytical Concordance, 1955.
BA	*The Biblical Archaeologist.*
B-AB	Barton, George, *Archaeology and the Bible,* 4th ed., 1925
B-AKA	Budge, E. A. W., *Annals of the Kings of Assyria.*
B-ARE	Breasted, J. H., *Ancient Records of Egypt.*
BASOR	*Bulletin of the American Schools of Oriental Research.*
B-BEC	Budge, E. A. W., *Books on Chaldea and Egypt.*
B-BK	Budge, E. A. W., *Book of the Kings of Egypt.*
B-EUP	Brugsch-Bey, Henry, *Egypt Under the Pharaohs.* Translation by Philip Smith, 2nd ed., 1881.
B-HE	Breasted, J. H., *A History of Egypt,* 1954.
B-HH	Botsford, G. W., *Hellenic History,* 1939.
BH-SA	Brothwell, D., and Higgs, E., *Science in Archaeology* (revised, 1969).
B-N	Budge, E. A. W., *The Nile,* 1910.
B-SKC	Baikie, J., *The Sea Kings of Crete,* 1913.
B-TT	Blegen, C. W., *Troy and the Trojans,* 1963.
CH	*Classical Handbook* (Appleton-Century, 1962)
C-SEI	Crowfoot, J. W., and G. M., *Samaria-Sebaste—Early Ivories.*
CKS-SB	Crowfoot, J. W., Kenyon, K. M., and Sukenik, E. L., *Samaria-Sebaste—The Buildings.*
C-GUA	Cook, R. M., *The Greeks until Alexander,* 1962.
C-HP	Ceram, C. W., Hands on the Past, 1966.
C-SH	Ceram, C. W., *The Secret of the Hittites,* 1956.
D-BGA	Demargne, P., *The Birth of Greek Art,* Translation by Gilbert and Emmons, 1964.
D-GP	Davidson, D., *The Great Pyramid,* 8th ed., 1940.
D-W	Diringer, D., *Writing,* 1962

E-AE	Emery, W. B., *Archaic Egypt*. Penguin Books, 1961.
E-COWA	Ehrich, R. W. (ed.), *Chronologies in Old World Archaeology*, 1954.
E-LDE	Elgood, P. G., *The Later Dynasties of Egypt*, 1951.
E-PE	Edwards, I. E. S., *The Pyramids of Egypt*, Pelican Books, 1955.
E-TS	Edgerton, W. F., *The Thutmosid Succession*, 1933.
F-ABH	Free, J. P., *Archaeology and Bible History*, 1954.
F-LAP	Finegan, J., *Light from the Ancient Past*, 1969.
G-BB	Gordon, Cyrus, *Before the Bible*, 1962.
G-EG	Gardner, A., *Egyptian Grammer*, 3rd ed.
G-H	Gurney, C. R., *The Hittites*. Penguin Books, 1954.
G-NHOTL	Gordon, Cyrus H., *New Horizons in Old Testament Literature*, 1960.
G-OSJ	Glueck, N., *The Other Side of Jordan*, 1940.
G-PM	Garstang, J., *Prehistoric Mirsin*, 1953.
G-RD	Glueck, N., *Rivers in the Desert*, 1960.
G-SJ	Garstang, J., *The Story of Jericho*, 1948.
deG-VA	deGrazia, A., (ed.), *The Velikovsky Affair*, 1966.
G-WOT	Gordon, Cyrus H., *The World of the Old Testament*, 1958.
H-FA	Hoyle, F., *Frontiers of Astronomy*, 1955.
H-H	Herodotus, *Histories*, Translated by DeSelincourt.
H-I	Homer, *The Iliad*. Penguin Books.
H-P	Harden, D., *The Phoenicians*, 1963.
H-PC	Hutchinson, R. W., *Prehistoric Crete*. Pelican Books, 1962.
H-RPIB	Horn, S. H., *Records of the Past Illuminate the Bible*, 1963.
HRS-CE	Hayes, W. C., Rowton, M. B., and Stubbings, F. H., *Chronology of Egypt*. . . .
J-AA	Josephus, F., *Against Apion*. Supplement to J-AJ.
J-AJ	Josephus, F., *Antiquities of the Jews*. Translation by Whiston.

JNES	*Journal of Near Eastern Studies.*
K-AHL	Kenyon, K. M., *Archaeology in the Holy Land*, 1960.
K-BH	Keller, W., *The Bible as History*, 1964.
K-DJ	Kenyon, K., *Digging up Jericho*, 1957.
K-G	Kitto, H. D. F., *The Greeks*. Pelican Books.
K-RCE	Kantor, H. J., *The Relative Chronology of Egypt* (in E-COWA), 1954.
K-SAP	Kitchen, K. A., *Suppiluliuma and the Amarna Pharaohs*, 1926.
L-ARAB	Luckenbill, D. D., *Ancient Records of Assyria and Babylonia*, 1926.
L-EA	Lloyd, S., *Early Anatolia*. Penguin Books, 1965.
L-EHPA	Lloyd, S., *Early Highland Peoples of Anatolia.*
L-RD	Libby, W. F., *Radiocarbon Dating*. Phoenix Series, 1965.
M-CEP	Macalister, R. A. S., *A Century of Excavation in Palestine*, 1925.
M-HE	Maspero, G., *History of Egypt.*
M-P	Macalister, R. A. S., *The Philistines*, 1911 (reprint, 1965).
M-SEC	MacNaughton, D., *A Scheme of Egyptian Chronology*, 1932.
N-HI	Noth, M., *A History of Israel*, 1960.
O-VVPW	Odom, R. L., *Vettius Valens and the Planetary Week.*
P-ANEP	Pritchard, J. B., *The Ancient Near East in Pictures*, 1954.
P-ANET	Pritchard, J. B. (ed.), *Ancient Near Eastern Texts*, 1955.
P-CAE	Poole, R. S., *The Chronology of Ancient Egypt*, 1851.
P-CAEM	Perkins, A. L., *The Comparative Archaeology of Early Mesopotamia.* No. 25 of *Studies in Ancient Oriental Civilization.*
P-EI	Petrie, F., *Egypt and Israel*, 1923.
P-EOT	Peet, T. E., *Egypt and the Old Testament*, 1923.
P-G	Pritchard, J. B., *Gibeon*, 1962.
P-HE	Petrie, F., *A History of Egypt*, 7th ed., 1912.
P-PE	Petrie, F., *Prehistoric Egypt*, 1920.
P-PI	Piggott, S., *Prehistoric India*, 1961.

R-AM	Rawlinson, G., *Ancient Monarchies*, 4th ed., 1897.
R-CH	Rollin, Charles, *Cyclopedia of History*, 1883.
R-EH	Rawlinson, G., *The Egypt of Herodotus*, 1924.
R-HAE	Rawlinson, G., *History of Ancient Egypt*, 1880.
R-HBA	Rogers, R. W., *History of Babylonia and Assyria;* 6th ed., 1915.
R-FJJ	Rowley, H. H., *From Joseph to Joshua*, 1950.
SDABC	*Seventh-Day Adventist Bible Commentary.*
SDABD	*Seventh-day Adventist Bible Dictionary.*
S-DCA	Seyffert, O., *Dictionary of Classical Antiquities*, 1956.
S-DGRBM	Smith, W., (ed), *Dictionary of Greek and Roman Biography and Mythology*, 1849-50.
S-CRS	Seele, K. C., *The Coregency of Rameses II with Seti I.* No. 19 of *Studies in Ancient Oriental Civilization.*
Sci. Amer.	*Scientific American*
S-RP	Sayce, A. H., (ed.), *Records of the Past.* New Series.
S-SCCAO	Schaeffer, C. F. A., *Stratigraphie Compaŕee et Chronologie* . . . ., 1948.
T-HPW	Thucydides, *The History of the Peloponnesian War.* Edited in translation by Richard Livingstone.
T-MNHK	Thiele, E. R., *The Mysterious Numbers of the Hebrew Kings*, 1931.
U-AOT	Unger, M. F., *Archaeology and the Old Testament*, 3rd ed., 1960.
V-AC	Velikovsky, I., *Ages in Chaos*, 1952.
V-EU	Velikovsky, I., *Earth in Upheaval*, 1955.
V-FEA	Vandier, J., *La Famine Dans L'Egypt Ancienne,* 1936.
V-WC	Velikovsky, I., *Worlds in Collision*, 1952.
W-BA	Wright, G. E., *Biblical Archaeology*, 1957.
W-DP	Woolley, L., *Digging up the Past.* Penguin Books, 1953.
W-FK	Woolley, L., *A Forgotten Kingdom.* Penguin Books, 1953.
W-HP	Weigall, A., *A History of the Pharaohs*, 1927.
W-M	*Manetho*, Translated by Waddel, 1956.

WM-GF	Whitcomb, J. C., and Morris, H. M., *The Genesis Flood*, 1961.
W-RD	Willis, E. H., *Radiocarbon Dating*, Chap. 2 in BH-SA.
W-RFMK	Winlock, H. E., *Rise and Fall of the Middle Kingdom*, 1917.
W-S	Wright, G. E., *Shechem*, 1965.
W-SHAE	Weigell, A., *A Short History of Ancient Egypt*, 1935.
W-AE	Wheeler, M., *Archaeology from the Earth*. Penguin Books, 1961.
W-WST	White, A. D., *The Warfare of Science with Theology*, 1955 reprint.
Y-AC	Young, R., *Analytical Concordance*.

CHAPTER I

ARE THE FOUNDATIONS OF ARCHAEOLOGICAL SCIENCE SECURE?

In a previous volume, the evidence has been presented pointing to the commitment of gross errors in the interpretation of archaeological observations in Palestine and in Egypt, leading us to an erroneous and highly exaggerated chronology of the dynastic period of the ancient world. These errors may be traced to the dating of the era now known as Early Bronze too far back on the time scale by 600 years or more. The more exact figure for the magnitude of this error depends on the date assigned to the end of the Early Bronze Age in the scheme of the Archaeological Ages. Since the dates assigned to the archaeological strata in Palestine, subsequent to the beginning of the Hellenistic Period (331 B.C.), are fixed by numerous discoveries of datable coins and written inscriptions, this 600+ years of unwarranted chronological expansion belongs to the time period between the end of Early Bronze and the beginning of the Hellenistic period.

So certain have scholars been that a mistake of this magnitude could not possibly have occurred without its prompt detection on the part of one or more colleagues, that suggested solutions to the problems of archaeology which lie outside the general framework of current opinion have not been given serious consideration.

Actually, there is nothing at all incredible in recognizing the possibility of mass scholarship making fundamental errors of such magnitude. The past history of scientific development is replete with examples of the failure of a near total scholarship to recognize error or to perceive truth. The concept of the germ origin of disease, now universally accepted, was hotly contested and debated at length before its general acceptance, because it represented a wide deviation from popular opinion. Mendeleef's law, which now stands as the fundamental basis for the modern concepts of atomic structure, was publicly ridiculed by scholars when first proposed. Almost from the time of the discovery of argon and related gases, it has been universally believed that these gases do not form compounds with other elements; hence the connotation as inert gases. Only recently has the erroneous nature of this assumption been demonstrated. Repeatedly, the conclusions of the Higher Criticism have had to be abandoned in the face of later discoveries, pointing to the use of faulty premises and faulty reasoning in arriving at conclusions.

Nor has Archaeology been free from making such errors. A few decades ago, it was almost the universal belief that dynastic Egypt reached back into the era of the 5th or 6th millennium B.C., and the opinion was well fixed that the period of dynastic Egypt could not be squeezed into a period as short as 3,000 years. Yet today, even the most liberal of scholars must allow a figure lower than this. Even though archaeological investigations had been carried out at the Jericho site for more than half a century, it was recently necessary to revise the date for the pottery associated with the fallen walls at this site. During investigations at Pithom in Egypt, it was noted that some of the bricks were made with straw; others without straw. This was quickly taken as evidence of Israelite construction on the basis of the account in Exodus 5, only to find later that bricks with and without straw are to be found in constructions far separated in time and area from Israelite occupation.

Stables were found at the site of Megiddo which were assigned an identity as of Solomonic origin regarded as unequivocal, only to find later that the stables belonged to an era notably later than that assigned archaeologically to Solomon. The identification of the massive temple at Shechem as that of the story of Abimelech was regarded over a period of years as a "must" only to find later that the date necessarily assigned to this structure was centuries earlier than that assigned archaeologically to the era of Abimelech. In bold statements that left no room for any alternate interpretation, evidence of a local flood in Mesopotamia was publicized widely as the "discovery of Noah's flood." That this identification was premature is now recognized by all but the most gullible. The Amarna Letters were first pronounced frauds when examined by scholars. It was not until many of these priceless inscriptions were lost or destroyed that their true value was recognized.

The list of such errors could be extended to great length and who knows how many others continue to remain unrecognized. It would seem that it is part of human nature to elevate current views of scientific investigations to a figurative position on a pedestal, as if a general agreement placed these conclusions above the susceptibility to further question or revision, yet even brilliant scholars continue to belong in the category of human beings. Research workers in areas much more susceptible to arriving at factual conclusions than is possible in the more obscure area of archaeology, recognize that first guesses are far more apt to be wrong than right. This process of guessing at the *interpretation* of facts (hypothesizing) is a legitimate phase of scientific investigation. It is the inability to distinguish the difference between an unproven guess and a scientifically demonstrated fact that labels one as unscientific in his thinking. Evidently some investigators in the field of archaeology seem to believe that the establishment of the interpretations to be placed on archaeological observations may be accomplished by totally different and far less rigid process than that required in other scientific disciplines.

The use of such expressions as "we now know," "it is certain," "without doubt," "it is widely believed," to refer to unproven guesses, does not constitute a satisfactory method for elevating these guesses to the realm of valid conclusions. Characterized as are the current views on the interpretations of archaeology by numerous anachronisms, inconsistencies, and anomalies, it cannot be safely concluded that the chronology of Egypt as now accepted is no longer susceptible to even major corrections. So long as the dating methods used in arriving at these guesses are in themselves subject to large questions as to their validity, statements of this type represent only what has been appropriately referred to as "begging the question."

Archaeology is anything but an exact science. The vast majority of archaeological finds taken alone are capable of numerous interpretations. It is only when all related finds are taken into consideration that final and unequivocal conclusions are at all possible. But we do not possess at the present time anything approaching the total information that archaeological investigations may reveal. Only a minor fraction of Palestine has been examined archaeologically and the territory to the east of Jordan has been largely limited to surface examination. The same limitations hold for

Mesopotamia, Syria, Anatolia, Crete, and other vital areas.

While scholars generally recognize these limitations of the available data, the opinion is nevertheless deeply fixed that no solution that lies outside the general framework of current opinion is worthy of serious consideration. The premise is solidly rejected that there is any possibility that scholars in total could make errors of such magnitude as to call for a re-examination of the very foundations on which the discipline of archaeology rests. Furthermore, the door has been effectively closed to the publication of any suggested solution to archaeological problems in scientific journals that even suggest such a starting premise.

Efforts to point out errors by means of private publications usually remain unread by those who could benefit most from them, and if read, they are commonly given the "silent treatment" as unworthy of the effort required to refute the evidence, or are brushed aside as representing only an unintelligent and prejudiced approach to the solution of imaginary problems. Evidence is not totally lacking that some scholars, unable to meet the challenge of such proposed solutions, do not care to jeopardize their positions professionally by even suggesting that such a solution merits serious consideration. Or again, they may read far enough into a thesis to find what are regarded as a few minor objections, and shutting their eyes to the numerous major difficulties in current views, may prefer to remain silent until such a time as one of higher reputation in the field indicates otherwise.

In a previous volume, the chronological discrepancies between current views on Egyptian chronology and Bible history were critically reviewed and an alternate chronology of Egypt proposed which removes the vast majority of these discrepancies and internal inconsistencies. The purpose of the present volume is to examine critically the validity of the dating methods used to arrive at current views, and to show that the archaeology of Palestine and of other areas of the ancient world can be more rationally interpreted in terms of this altered chronology than is possible against the background provided by current views on Egyptian chronology.

No claim is made that there are no problems remaining. Certainly, certain premises commonly regarded as above question require a re-examination of their validity. It is contended that the number and magnitude of the remaining problems is small compared to those that result from the currently accepted views. Not only so, we are pointed clearly in the proper direction for the solutions to the remaining problems when further information becomes available.

It may be expected that some will interpret the content of this and a previous volume as an attempt to undermine and depreciate the work of archaeologists and historians; no such intent or aim is entertained. There remains no question whatever in the mind of the author as to the enormity of the task that has been undertaken or to the loyalty and devotion of this group to their task. His conflict is with the interpretations that have been placed on archaeological finds and with what he regards as an unwarranted relegation of Scripture to the level of myth and legend as a starting premise for such interpretations.

This volume, as was also true of the previous volume, is directed to those who have a large stake in the correct interpretations of the archaeological finds in Palestine. While the matters with which we deal may be of passing interest only to many, the stakes are high on the part of those who have a vital interest in the question of the historical reliability and origin of the Old Testament Scriptures. This group should include the vast multitude encompassed by membership in the various Christian bodies and the large number of persons of the Jewish faith. It is to the Scriptures that Christians look for the background of development of Christianity and its proper significance to the world today, and it is to these same writings that the Jews must look for information relative to their own past and for the basis of their beliefs, which have set them apart as a distinct people, both racially and religiously. Certainly those who think that the Scriptures represent only a conflation of myths, legends, and traditions of highly limited value historically, should be interested in a critical examination of the evidence which is presumed to demand such an evaluation of these writings. Scholars on either side of the controversy over the origin of Scripture should find the developments of unusual interest.

The evidence and arguments presented in this volume are in support of, and in further confirmation of, the general correctness of the revised chronology of Egypt as outlined in Volume I of this series. An outline of the altered chronology is provided as Figure 2 of Volume I. The principal points of deviation from current views are: (1) Dynasties I and II are regarded as roughly contemporary with Dynasties III to V, though the latter sequence had a beginning about one century later than the beginning of Dynasty I. (2) Dynasties VI and XIII are given positions roughly contemporary with Dynasty XII, thus eliminating completely the so-called First Intermediate as a creation of modern historians. (3) Dynasties VII to X thus fall in the Hyksos period (the so-called Second Intermediate) paralleling Dynasty XIV and the Hyksos dynasties XV and XVI, (4) The Hyksos period is expanded from about one century as currently held to over four centuries to agree with the period between the Exodus and the establishment of the Israelite Monarchy under Saul. (5) Manetho's arrangement of Dynasties XVIII and XIX is retained which recognizes Dynasty XIX as an offshoot from Dynasty XVIII at the time of Seti I, in contrast to the modern rearrangement of Manetho which makes a sequence of these two dynasties. (6) Dynasty XXIII is made contemporary with late Dynasty XVIII and follows Dynasty XIX. (7) The order of Dynasties XXII and XXIII is reversed to agree with the order as given in the Sothis king list. (8) Dynasties XX to XXII are made parallel to Dynasties XXIV to XXVI. These alterations call for a complete revision of the dates to be attributed to all the Egyptian dynasties except Dynasties XXIII to XXVI inclusive. The approximate revised dates are as shown in Figure 2, Vol. I. Current views regard all of the Egyptian dynasties as having ruled in sequence, except that late Dynasty XIII and all of Dynasty XIV are recognized as having ruled contemporary with the Hyksos Dynasties XV and XVI.

CHAPTER II

WHAT HAPPENS TO SYNCHRONISMS USED TO SUPPORT CURRENT VIEWS?

In the course of the last century, numerous works have appeared presenting archaeological evidences which are purported to confirm in an astonishing manner the historicity of the Biblical accounts. A question naturally rises as to what happens to all this evidence if it is true that the chronology of ancient Egypt must be altered by some six centuries from the dates currently accepted. Does the evidence stand to witness to error of reasoning leading to the proposed revision, or will a critical examination of this evidence reveal that the valid fraction is retained by the revision and only the insecure evidence requires rejection? Are we going to be obliged to disregard well-established synchronisms in order to provide some semblance of support for a revised structure, or will such an examination reveal that many of these synchronisms, regarded as well-established, are but the offspring of the popular chronology itself rather than providing any support for it? It is exceedingly difficult to believe that such a critical examination of this material will not provide some clear indications in one direction or the other.

In evaluating the answers to be provided to these questions, two facts should be kept clearly in mind. The first is that it is not Bible chronology that is being altered by the proposed revision; it is Egyptian chronology and the chronologies of the other ancient nations whose chronologies depend on the correctness of Egyptian chronology. As will appear, the kingly line of Assyria does not require significant alteration back as far as the 14th century B.C. The line of known Chaldean kings is tied solidly to the Assyrian line back this far and is also accepted without appreciable qualification by the revision. It is rather the proposed synchronisms between Egypt or Palestine with Assyria or Chaldea prior to c. 900 B.C. that are rejected as insecure. The second point to be remembered is that the writer has freely admitted in a previous volume[1] that except as the proposed revision eliminates at large the anachronisms and inconsistencies in the current views *without* introducing other serious difficulties, nothing of genuine significance has been attained by it. To merely suggest a different chronology based on a different philosophy but presenting no clear-cut advantages in terms of freedom of major difficulties, is hardly to be regarded as a worthwhile contribution. But by the same token, if such a revision, based on an alternate approach and an alternate philosophy, *does* eliminate these major difficulties at large without the introduction of others, then the revision stands to confirm the general correctness of the altered approach and of the altered philosophy.

With the general outlines of this revision now before us (Figure 2, Vol. I), it is possible to classify the synchronisms used to support the currently accepted structure into three groups. These are (1) synchronisms that continue to hold for the revision and which thus require no further discussion here, (2) proposed synchronisms that were once accepted as supports for current views, but which have more recently been abandoned or severely qualified by scholars generally on the basis of subsequent information that has come to light and, (3) proposed synchronisms which are still regarded as supports for current views but which can be shown to be either insecure or without chronological significance.

I. Synchronisms that Continue to Hold for the Revision

A comparison of the revised chronological structure (Figure 2, Vol. I) with the conventional structure shows that the proposed revision does not shift significantly the positions assigned to Dynasties XXIII to XXVI by current views. And since the chronology of Israel has not been altered, any and all genuine synchronisms between Israel and Egypt for this period are retained by the revision and require no further discussion here. The same holds true for synchronisms between Israel and late Assyria and Chaldea after the mid 9th century and onward since the chronologies of these nations, subsequent to the 14 century, have not been significantly altered.

II. Proposed Synchronims Necessarily Abandoned

A partial list of synchronisms earlier regarded as supports for the current chronological structure of Egypt, but which have had to be abandoned, or severely qualified on the basis of information appearing later, has been provided in a previous volume. Still others will be shown to belong to this category as the archaeologies of the various sites in Palestine are re-examined in subsequent chapters.[2] The very necessity of abandonment of so many synchronisms, once regarded as solid, should provide a strong suggestion that current views do not necessarily represent something akin to fact.

III. Insecure Synchronisms Previously Considered

Of the insecure synchronisms, the fallacies of those related to the incidents of the Exodus, the Oppression, and the Conquest have been considered in a previous volume. Further confirmation of the insecurity of these will appear also with the re-examination of the archaeology of Palestine sites in subsequent chapters of this volume. So also has the fallacy of the proposed identity of Shishak of Scripture with Sheshonk I of Dynasty XXII been noted.[3] Facts that contradict this proposed identity have been presented in the XVIIIth chapter of the previous volume of this work. Of the synchronistic supports suggested for the current chronological structure of Egypt, and yet to be considered, those based on the Amarna Letters are regarded as meriting consideration. An adequate discussion of this material presupposes a consideration of the chronology of Assyria and is considered in a subsequent chapter dealing with the chronology of Assyria.[4] The remaining proposed synchronisms, that can be considered to advantage under the chapter title, belong to the category of proposals having no real chronological significance or having no secure basis.

It would seem to be popularly believed that there exists a long list of proposed synchronisms prior to the mid 8th century which stand to confirm the Bible as history and which also provide support for the correctness of the traditional chronology of the ancient world. This is anything but the case.

The writer contends that there is not a single incident in Bible history prior to the 9th century B.C. that can be unequivocally synchronized with the history of Egypt within the framework of current views on ancient chronology, and which could be expected to be revealed by archaeological investigation. The single proposed synchronism of significance that falls between the beginning of the 9th century and the beginning of Dynasty XXIII in Egypt has been retained only by forcing it into a mold that does not otherwise fit.[5] In making this claim,: the author wishes to be clearly understood that reference is to synchronisms based on written accounts of the same incident in Scripture and in the Egyptian inscriptions, or synchronisms based on an incident recorded in the writings of one people which can be confirmed unequivocally by the archeaology of another people. Synchronisms that fit satisfactorily into either structure lie outside the limits of this claim as do also those whose archaeological support depends rather entirely on the accepted chronological structure itself.

It is fully recognized that many cases of valid synchronism can be established which relate in *approximate manner* the remains from one Palestinian mound level to the remains in a specific level of another mound, or even with a specific foreign culture, or with the reign of a specific dynasty or king. The former have no significance at all to the problems before us and the latter have no significance except as the foreign culture, or dynasty, or king can be dated unequivocally in terms of Bible chronology. It is the validity of the dates assigned to the Egyptian kings, popularly regarded as having been satisfactorily demonstrated, that are here challenged, a challenge that is based on the fact that the assumed correlations leave numerous anachronisms of intolerable proportions.

IV. Chronological Correlations Based on Situations With No Unique Qualities

This type correlation might be termed a "situation synchronism" though there is a reasonable question as to whether such should be referred to at all as a synchronism. Any proposed time equation based on similarity of conditions can be regarded as secure if, and only if, the situation is sufficiently unique to reasonably eliminate other possibilities of interpretation. Such similarities may well have a value in *confirming* a synchronism that has been established as relatively secure by independent means, and particularly so if several such can be brought to bear. ***But certainly to rest the full weight, or even the major weight, of a hypothetical structure on such evidence, when the more unique bases for synchronism are left as anachronisms, is*** *not a satisfactory method of arriving at truth.* It is the writer's contention that this is exactly the situation that has resulted from current attempts to prop up a sagging traditional chronology of Egypt by means of this type of evidence.

With even the Greek legends exhonorated as having at least a kernel of historical value,[6] it has not proved popular, even among those who reject the internal claims of Scripture as to their origin, to reduce them to a level notably below that of those legends. To avoid such drastic devaluation in the face of mounting archaeological evidence that requires interpretation in contradiction to Scripture, props of any kind are welcomed that can be used as a basis for retention of some degree of confidence in these writings as an alternative to eliminating them entirely from consideration. Sooner or later, the real crux of the problem should become apparent to all. It is a vain hope to expect that archaeology, interpreted in terms of the popularly accepted premises, can ever be harmonized with Scripture regarded as historically reliable. Most scholars are quite aware of this fact and have abandoned any expectation that this can be accomplished; some have felt quite free to belittle such efforts. It is the few who are clinging desparately to such a hope, in the face of an impasse of increasing magnitude, who must either demonstrate a quite different interpretation of archaeology as acceptable, or compromise their faith in a Scripture that can be considered as historically reliable.

While it is true that many writers have used this type of correlation as a basis for confirming Scripture, there is usually a reticence to refer to such evidence as synchronisms, yet the inclusion of such materials under titles dealing with confirmation of Scripture infers such a supposition.[7] Sometimes there is a guarded inference to this effect; in other cases it is only stated that the evidence *suggests* that a similar incident or situation of Scripture *could have* occurred or *might be* thus related. The mere fact that situations similar to those described in Scripture are found in the secular inscriptions of antiquity, falls far short of providing a confirmation of Scripture as historically reliable.

While a degree of interest may surround evidence that certain incidents of Scripture *could have occurred,* it is far more critical to know that they *did* occur as written. It is in the era of the early history of Palestine where convincing synchronisms are needed to confirm the historicity of Scripture, and it is in this era where such are totally lacking in terms of the currently accepted interpretations of archaeology, and where virtually nothing of significance is offered to us on which to base a solid belief in the historicity of the accounts of early Scripture. Certainly these early accounts do not lack for unique incidents that could be expected to be revealed archaeologically. This situation suggests strongly that there are but two defensible approaches to the solutions of problems related to the archaeology of the ancient world. One is that taken by scholars generally who disclaim any necessity for agreement between Scripture and the interpretations of archaeology; the other is that adopted by the writer, i.e., that of demonstrating that it is the interpretations of archaeology that are in gross error rather than Scripture. The writer regards himself as belonging to that small group of conservatives who place an implicit confidence in the historicity of these writings. He is nevertheless frank to state that if his faith had to rest on such evidence as is provided by these proposed situation correlations, this faith could be easily shaken, for he finds nothing of significance in these popular works designed to confirm the early Scripture as history. By early history is here meant all Scripture that deals with incidents prior to about the beginning of the 9th century B.C.

The astonishing situation is that skeptics of the Bible as history have not been more vocal in challenging the use of this type of evidence as a basis for confirming the historicity of Scripture. The reasons for this are not readily defined though a few intelligent guesses should not be out of place. One is the tacitly accepted definition of history as "a narrative of events connected with a real or imaginary object, person or career; a tale. . . ."[7a] By this definition, legends and myths become history. In this sense, a treatise on the topic *Bible as History* may be taken to mean Bible as myth and legend. Commonly, writers in this area have not defined the term *history* as used by them, and one can only deduce, rightly or wrongly, from the contents of the work what definition is to be understood. It is for this reason that the present writer has repeatedly used the terms *reliable history* or *dependable history* as a basis for distinction from myths, fables, and legends.

Another reason for the virtual absence of challenge of the use of these proposed correlations of situations with no unique qualities is perhaps the recognition that this material is quite inoccuous to popular views and does not merit the effort for rebuttal, or perhaps the evidence, such as it is, is welcomed as a means of obscuring the true degree to which Scripture must inevitably be rejected if these feeble props are removed. A total abandonment of Scripture as an historical source would represent an exceedingly severe blow to the entire discipline of Archaeology.

V. *Some Examples of the Use of Ubiquitous Situations*

It will not be possible to mention every such situation in this brief treatise that has been used to infer a confirmation of Scripture in terms of the current chronological views. Reference to a number of these that have been more widely used should suffice to convince the thoughtful reader that the nature of these is such as to provide no solid evidence at all to warrant the use of this material, except as the purpose is only to support Bible as history, so defined as to include myths, fables, and legends. We begin a brief rehearsal with the discovery of a painting in the tomb of Knumhotep from the reign of Sesostris II of Dynasty XII (Plate I)[8]

The painting shows foreign-looking figures wearing a different type of clothing than that worn by the Egyptians, thus allowing the deduction that they represent foreigners. The people were a fair-skinned race with sharper features than those of the Egyptians. They are identified in the accompanying inscription as sand-dwellers, suggesting that they lived in the desert area. Their leader was named Abishai (or Ibsha), clearly a Semitic name. When first discovered, the painting was regarded as representing the brothers of Joseph coming to Egypt to buy corn.[9] When it became apparent that the era of Sesostris II could not be satisfactorily synchronized with the descent of Jacob into Egypt, other interpretations have been proposed. One writer considers it no less than a fact that the picture belongs to the time of Abraham,[10] and if it does not actually picture Abraham's visit to Egypt to escape famine, it at least provides us with a correct concept of how Abraham looked when he went into Egypt.

But we enquire, how does this writer *know* that the painting dates from the time of Abraham. With differences of opinion among scholars for the date of the Exodus ranging from c. 1275 B.C. or later to 1612 B.C. or earlier, and with opinions on the length of the period from Abraham to the Exodus varying from about 400 years to well over 600 years, on what basis is it possible to state as fact that the era of Abraham falls early in the XIIth Dynasty? If Abraham cannot be placed in Egyptian history with any more precision that within half a millennium, then what basis do we have for even hypothesizing an identity of this painting with Abraham's visit to Egypt, or how do we know that Abraham had any resemblance to the people pictured in this painting? How do we know that this painting is any more closely related in time to Abraham than was the discovery of America related to the era of World War II?

It should be noted that the nature of the incident pictured has no unique qualities, either in time or in detail. Are we to presume that the entrance of Abraham or of Jacob and his sons into Egypt were incidents unparalleled in the course of half a millennium of Egyptian history? We are clearly dealing here with evidence which has no value at all, either for corroborating Bible history, or for providing any basis for the assumption that current views represent a correct correlation of archaeological observations in either Egypt or Palestine with true Israelite history. The most that can be drawn from this painting is that foreigners of Semitic origin, but not otherwise identifiable, at a time not definable on the B.C. time scale, were permitted entrance into Egypt. The actual evidence indicates that this group did not come from Palestine but rather from the desert area to the east of Egypt.[11] But of what significance is this as far as confirming the historicity of the Old Testament?

Another story widely referred to under titles suggesting confirmation of Scripture as history is that to be found in the lengthy inscription of Sinuhe in the reign of Sesostris I, early in Dynasty XII.[12] It seems that for reasons not stated in the inscription, Sinuhe was obliged to flee Egypt, eventually finding a temporary home with a bedouin tribe in the territory of Phoenicia. Sinuhe gives us a detailed account of his adventures and of his eventual return to Egypt with honor. If it is a fact that the painting from the tomb of Knumhotep belongs to the time of Abraham, then, of course it is also a fact that Sinuhe belongs to about the same era since both inscriptions are from the early XIIth Dynasty. So reasons one writer.[13]

> . . . For we now know that the Egyptian had written a factual account of Canaan at about the time that Abraham migrated there.

And just how do *we know* this to be a fact? We may suppose that since the author of this interpretation is using the story to confirm Scripture, the bases given for the conclusions are the best that are available. Hence it is with some astonishment to find that the conclusion is based on a correlation of a statement in the inscription to the effect that the land where Sinuhe dwelt was a "fine country where wheat, barley, vines, and fig trees grow" with the statement in Scripture that the land of promise was "a good land, a land of wheat, and barley, and vines, and fig trees."[13a] But we ask in all seriousness: what chronological significance is to be attached to this similarity of description? The territory is not the same in the two cases. And what is there unique chronologically about the growing of wheat and barley, and vines and fig trees? To attach any particular significance to the story of Sinuhe as confirming Biblical history or in correlating Biblical history with that of Egypt is unthinkable.

Sinuhe lived in a tent as a nomad. This might be taken to indicate that the country was sparsely settled at the time, but this is not a necessary conclusion. Certainly there were cities in Phoenicia at this time since Sinuhe states that he went to the city of Byblos. Sinuhe lived as a nomad by choice and not from necessity due to the absence of cities. He also indicates that there were other Egyptians living there at the time. Neither is this situation unique. There is no way of proving that this was not true throughout the history of Phoenicia. Nor do the unstable conditions pictured in the account have any chronological value as far as setting these incidents in the period of the judges.[14]

Scholars commonly place the descent of Jacob into Egypt in the Hyksos period.[15] The Scripture statement that the Egyptians held shepherds in disrepute[16] is taken as confirmation of this placement, since the Hyksos, like the sons of Jacob, were also shepherds and would not object to the incoming Israelites as shepherds. However, this is not the only reasonable interpretation of this detail. Certainly the Egyptians possessed both sheep and cattle of their own[17] and we are not told the reason for this prejudice when they were themselves shepherds on a smaller scale. Perhaps the reason was geographical since the problem seems to have been solved by occupation of a specific area;[18] or it may have been the competition of large scale ownership that was the source of the friction. Whatever the cause, the detail is not adequate for correlating the Descent with the Hyksos period chronologically.

Still another situation commonly used to confirm the Hyksos period as that of the Descent is the detail of granting to Joseph the king's second chariot at the time of his elevation to the position of vizier.[19] It is claimed that chariots were not known in Egypt prior to the Hyksos era and that it was the Hyksos who introduced the use of the chariot into Egypt. If these premises are correct, then Joseph must have been in Egypt at the time of, or after the rule of the Hyksos. Actually, these premises are not at all factual; they are speculative and hypothetical, based on the appearance at about this time of a new type of fortification. Since a new type of fortification is a natural sequence to a new type of weapon of warfare, it is *assumed* that this new weapon was the chariot first used by the Hyksos. This premise is not accepted by all scholars and evidence has been presented in contradiction to this interpretation. Reference to this evidence is noted elsewhere in this treatise.[20]

It is quite true that there are no earlier extant references to the use of the chariot in Egypt prior to the XVIIIth Dynasty, but this does not prove that there were no chariots earlier than this, nor does it prove that there were no references to the chariot before this time. It is not scientifically permissible to draw conclusions from an absence of available data.[21] *Certainly chariots were known elsewhere before this.* A pictorial inscription discovered at Tell Halaf (in Mesopotamia), belonging to the predynastic period, shows a chariot with an eight-spoked wheel carrying a man.[21a]

> . . . Among the other technical developments of the time appears to have been . . . what, if its usual interpretation is correct, is the earliest known picture of a chariot. The chariot has great eight-spoked wheels and carries a man.

Plate I. Painting of a Semitic Family Entering Egypt (from the tomb of Knumhotep at Beni-Hasan) which has been variously interpreted as of Jacob and his sons entering Egypt, of Abraham and his caravan entering Egypt, or as merely illustrating what Abraham's caravan looked like.

Plate II. Section of Inscription from Ur Showing the Use of the Chariot and Dated Earlier Than the Hyksos Period

The chariot is mentioned in the Mari Letters, currently dated, c. 1800 B.C., thus antedating the Hyksos invasion.[21b]

> . . . This interesting letter proves that horse-drawn chariots were already known about 1800 B.C. in Asia Minor and Syria. This agrees with the evidence of the Cappadocian Tablets and of the early Hittite texts, which shows that horses were coming into use for military purposes as early as about 1900 B.C.

A pictorial inscription from Ur of Chaldea is also extant showing horse-drawn chariots and dated this early or earlier.[22]

The apparent absence of reference to the chariot in Egyptian inscriptions may mean nothing more than their nonuse in warfare prior to the XVIIIth Dynasty, this being the subject of most Egyptian inscriptions where such mention could be expected. There is every reason to believe that chariots were used only as a royal conveyance for an extended period of time prior to their use in war. The comments of Albright on this situation as it probably existed in the XIIth Dynasty are most reasonable.[23]

> . . . horse-drawn chariots were still very rare and probably rather slow, compared to their speed two or three centuries later.

The inference in the Biblical story is that the chariot was *not* in common use at the time of Joseph. The suggestion is that it was a real honor for an official to have a chariot in which to ride and that the king may have had only two chariots, or perhaps that these two represented a notably advanced design not otherwise paralleled in Egypt at that time. Certainly, one need presume the existence of no more than two chariots for the story to have a satisfactory setting long before the Hyksos invasion. If the concept can be seriously entertained that a multiplicity of centuries were required to make some slight change in the design or decoration on a piece of pottery or arrowhead, one's credulity should not be strectched to the breaking point to recognize that the first chariots in Egypt, as elsewhere, were not used as war vehicles, or that a significant period of time elapsed between the production of the first chariots and their eventual use in warfare. On the other hand, there is something strangely anomalous in the concept that the Hyksos should be credited with the invention of the chariot when they were so completely nonproductive in the arts otherwise.

Actually, direct evidence that the Hyksos ever used or possessed a single chariot is totally missing. The Hyksos produced no inscriptions of any kind. The entire concept of Hyksos possession of chariots is unfounded supposition.[24]

> . . . By this time [era of the Hyksos invasion] horse-drawn chariotry had been introduced as the most important instrument of warfare, and we *must picture* the northern hordes as sweeping through Palestine and Egypt in swift chariots. . . . [Emphasis ours.]

It has not even been demonstrated that the Hyksos came from any northern territory.[25] The identification of the occupants of Palestine as Hyksos during or before or after the Hyksos control of Egypt is anachronistic.[26]

Many other examples of the use of situations that are anything but unique as bases for correlation in time are to be found in a variety of popular volumes designed to corroborate the Bible as history.[27] While some of this material may have a value in a qualitative sense, none of these examples provide any thing resembling a chronogical synchronism, and none provides any worth-while contribution to the problem of a truly historical Scripture as distinguished from a proposed compilation of myths and legends.

A vaguely inferred connection between Moses and the era of Sargon of Akkad is made on the basis of similarity of the inscription of Sargon with the story of Moses as an infant having been hid in the bulrushes of the Nile. Another inferred connection links Akhnaton of Dynasty XVIII with Moses' era on the basis of the monotheistic beliefs of both; another would link Moses with the era of Hammurabi on the basis that the code of Hammurabi has a number of parallels with the Mosaic code; still another would identify Hatshepsut of Dynasty XVIII as the foster mother of Moses on the basis that the rule of Egypt by a woman was rare, though Scripture says nothing at all to the effect that this particular daughter of the king ever became a ruler of Egypt. Even if the foster mother of Moses was only the wife of a king, it may be assumed that virtually every king of Egypt had his queen.

One writer would reject the concept that the pharaoh of the Exodus lost his life in the Red Sea to make room for Amenhotep II as this pharaoh, while noting in support of this identification that the successor of Amenhotep was not the eldest son, thus supposedly confirming Scripture in stating that the eldest son of the pharaoh died in the 10th plague. Another supposes that the king "who knew not Joseph" must be the first king of a new dynasty, though we are left to guess just why this is a necessary conclusion. A number of cases involve references to certain *customs* noted both in Scripture and in the secular inscriptions. But what evidence do we have to indicate the period of duration of these customs to permit such usage of this type of evidence for chronological purposes? The most that can be deducted from this type evidence is that the writer was familiar with these customs. Even a novel, with no inferred basis in fact, may make very accurate references to prevailing customs.

Why prolong the rehearsal? The writer would suggest as a guiding principle that the use of such materials, as bases for establishing correlation in time between the histories of Israel and her contemporaries, be delayed until such time as more unique details of the accounts are met by the proposed placements. When two histories have been thus properly correlated in time, it may be expected that there will be evidences of this type to confirm the correctness of the correlations. In the face of the serious anachronisms that result from the current views on these placements, it cannot be said that these more unique details have been thus satisfactorily met. Nothing short of this procedure permits a rational recognition that Scripture has been demonstrated as historically reliable as distinguished from myth, fable, and legend.

VI. Proposed Synchronisms Based on Similarity of Names

Another type of synchronism used widely to correlate the traditional chronology of Egypt with Biblical history depends on a presumed identity of persons with the same or similar names. The classical example of this is the identification of the Biblical Shishak, who sacked Solomon's temple, with Sheshonk I of Dynasty XXII. The fallacy of this proposed synchronism, and the anachronisms that result from its acceptance, have been discussed in detail in an earlier volume.[28] Further discussion here is limited to a reply to an objection offered against the alternate identification of Shishak with Thutmose III, who is known to have made a conquest of Palestine. It has been claimed that this identification is impossible, since all five of the names of Thutmose III are known, and none of these is even remotely equivalent to the name Shishak. The five names are: (1) the Horus name, (2) the Nebti name, (3) the Golden Horus name, (4) the Suten Bat name, and (5) the son of Re name.

The unstated premise on which this objection rests could be stated thus: no Egyptian king could have, or ever did have, names other than these five or readily recognizable deviations of one of these five. It is this unstated premise which the writer challenges as invalid and not without repeated exceptions. The number of such exceptions in the era of the XVIIIth Dynasty alone is adequate to indicate that Egyptian kings were not necessarily limited to these five names. Josephus[29] lists the names of the kings of this dynasty, and in several cases the names are totally unlike any one of these five names. Chebron remains unidentifiable as a name otherwise known for any XVIIIth Dynasty king. Amesses is certainly an alternate name for Hatshepsut, but it is not one of her five names. Orus of Josephus would seem to be Amenhotep III, though none of his five names would suggest such an identification. Herodotus refers to Egyptian kings known to the Greeks by names unknown to the Egyptian inscriptions. Evidently, the Egyptian kings were commonly known in other countries by names other than any of these five. This may explain the occurrence in Scripture of the names Zerah[30] and So,[31] names not otherwise known in the Egyptian king lists. The Scriptural reference to an Assyrian king known to the Bible writer as Pul[32] was long regarded as in error since no such king was known. Later, the name was found to be an alternate of Tiglathpileser.[33] There is thus no valid reason for rejecting the identification of Shishak of Scripture with Thutmose III if he meets the specifications otherwise, particularly when such specifications include some that are exceedingly unique.

Another example of error that may arise from attempts at synchronism based on similarity of names, while by-passing more significant evidence, is that which presumed to make Abraham a contemporary of Hammurabi of Babylon.[34] The basis for the proposed synchronism was the Scriptural account in Genesis 14 of the battle of the four eastern kings against the five kings of Sodom, Gomorah, Admah, Zegoin, and Zoar. The first of the eastern kings has the name Amraphael, a name which was identified with Hammurabi on the basis of a similar sequence of consonant sounds in the two names. At that time, Hammurabi was dated c. 2300 B.C. Abraham was thus given a similar date, though this position was indefensible in terms of Bible chronology.[34a] A second king having the name Arioch was equated with Eriaku of the cuneiform inscriptions. A third king bears the name Chedorlaomer, which name was taken as the equivalent of the Elamite name Kudurlagamer. While this latter name is not known in the cuneiform inscriptions, similar names are known. For example, Kudurmabug, king of Larsa, is known to have been a contemporary of Hammurabi. Since Chedorlaomer is stated to have been king of Elam, it was supposed that Chedoraomer is the same person as Kudurmabug. The evidence seemed conclusive that Abraham belonged to the era of Hammurabi.

With the passage of time, it was found necessary to periodically resurrect Hammurabi from his position c. 2300 B.C. and move him by increments down to his present precarious position c. 1728 B.C., this date still being a matter of controversy.[35] Unfortunately the date 1728 for Abraham does not fit well into any theory for the placement of the Exodus, unless we make exception for the theory which would regard as futile the assignment of Abraham to any particular era. A further difficulty has risen in the meantime when philologists have had opportunity to scrutinize more closely the proposed identification of the names Amraphael and Chedorlaomer with the cuneiform names Hammurabi and Kudurmabug. Apparently the identities do not appear nearly as convincing now as they did at first glance.[36] It appears that most scholars have now abandoned, or at least de-emphasized, these proposed equivalents, though some continue to regard them as essentially equivalent to fact.

When Joseph was sold into Egypt he is said to have married Asenath, daughter of Potipherah.[37] The name Asenath is rare in Egyptian inscriptions until the XVIIIth Dynasty,[38] while the name Potophar, as well as the name give to Joseph (Zaphnath-paaneah), is not known until the XXIInd Dynasty.[39] Does this provide evidence that Joseph was a contemporary of Solomon? More defensible is the deduction that names do not necessarily belong to any specific era and cannot be used with safety to date their owners, *except as the identity can be unequivocally established otherwise*.

The presumed fixity of the broad outlines of ancient chronology can be traced to a failure to recognize the fallacy of certain proposed synchronisms based on names at the expense of disregarding the anomalies introduced in the process. This is the type error that has been made in presuming that the Ramessides of the Sothis king list must be a duplication of the line of Ramessides of Dynasty XX, though they are far out of line with Dynasty XX, and the reign lengths do not agree with those of the later kings.[40] The name Sesostris is common in the XIIth Dynasty, but it is not unique to that dynasty; Seti I also was known by this name.[41] The Amarna Letters have long been regarded as fixed chronologically to the early 14th century, based on the assumption that the name Assuruballit and associated Kassite names must refer to persons with these names in the 14th century. But the name Assuruballit continues to appear among the names of Assyrian kings down to the very end of Assyrian history.[42] What should be more disconcerting is the fact that the stated ancestry of Assuruballit of the 14th century does not agree with the stated ancestry of Assuruballit of the Amarna Letters.[43] The same type of error is involved in the presumed identification of the Habiru of the Amarna Letters with the invading Hebrews[44] at the time of Joshua and in the identification of Rameses II as the pharaoah of the Oppression.[45]

It should be apparent that even if it can be proved beyond question that two names from different sources are identical, this still does not prove that the names belong to the same person or even to the same era. As in Scripture, so secular inscriptions commonly identify personages by only one of his names. Can we safely assume that the same name was not used by more than a single person in any given era or that the same name was not used by persons in different eras? To be sure, in some cases, additional information is available to make unequivocal identification possible, but in the absence of such, it would seem just good judgement to use a maximum of caution in using names as a basis for critical synchronims, at least until the more solid bases for synchronism have been shown to hold, and even more so when such proposed identifications introduce serious anomalies and anachronisms. An attempt has been made in this treatise to hold to this principle and to use such evidence only after proposed synchronisms have been established by more secure evidence.

VII. Synchronisms Based on Insecure Identifications of Archaeological Finds

In the last analysis, it must be admitted that the total synchronizing of the histories of Egypt and of Palestine is based on the presumed correctness of interpretations given to certain critical archaeological observations in Palestine. The entire question of the acceptability or nonacceptability of the views which make up the discipline known as Biblical Archaeology depends on the validity of the assumed correctness of these interpretations. If the contentions of the writer are correct, then virtually all of the archaeological material from Palestine in any way related to chronological problems is being erroneously interpreted, because of misinterpretation of a few critical observations. The descriptive phases of the reports, of course, remain intact, as do also certain qualitative data confirming the existence of certain peoples and places mentioned in Scripture and in other extra-Biblical sources. So also the identifications of archaeological destructions and constructions for the Hellenistic era and later may be regarded as properly correlated with the written sources. It is here contended that for the era earlier than the Hellenistic period there has been an increased degree of error in the proposed chronological assignments so that by the time of the end of the Israelite monarchy, there is little indeed that has been correctly placed in its proper historical background. It is not until very late in Palestinian history that the chronological assignments become unequivocal.[46]

> . . . Chronology in Palestine cannot stand on its own feet until one is dealing with a relatively late epoch.

There are many factors that have contributed to an erroneous interpretation of the archaeological observations in Palestine. Fundamental among the causes were the acceptance of the conclusions of the Higher Criticism as the starting point for the making of interpretations, and the placement of an unmerited confidence in the dating methods that have been used to arrive at these interpretations. If scholars had kept their minds open on the evaluation of these unproven premises, the other factors would no doubt have taken care of themselves in the course of developments, in spite of the enormous difficulties to be surmounted. Having committed themselves irreversibly to these premises as equivalent to fact, scholars find that the difficulties of making correct deductions are of such magnitude that their combined wisdom is inadequate to surmount them. A brief review of some of the major difficulties may help one to understand why gross errors were not only possible but inevitable.

1. The vast majority of archaeological observations at Palestinian mounds do not provide *per se* any information whatever that is of value for establishing a chronology. The remains of a city wall or dwelling or other structure, a pavement, a fortification, the ruins of what might have been a temple — these and similar finds could be interpreted to fit into several, or even many, chronological schemes, with no secure basis for controverting any one of them.
2. In no case have the ruins of a destroyed Palestinian city of the era in question been found to contain any written information relative to the identity of the authors of the destruction. The observations otherwise provide no more than vague hints as to such identification, reducing efforts at interpretation to speculation based entirely on the assumed correctness of previous interpretations made on the same sort of obscure evidence.
3. The same holds true for observed reconstructions.
4. In no case during the era of the monarchy has the name of the ruling king been found, which would provide a basis for correlating any stratum with Biblical history.
5. Tomb objects and scarabs cannot be used rationally to provide even relative dates, since the objects found in the tombs, even if inscribed, do not necessarily belong to the time of the burial, and scarabs are universally recognized

among scholars as the poorest sort of evidence to this end.[47]

6. Apparent age may be a most deceptive factor on which to assign even relative dates.
7. The thickness of a stratum deposit has no necessary relation to the length of the period represented.[48] A thin stratum of nonoccupation might represent a decade or a millennium.
8. There is no verified standard by which destructions and reconstructions can be correlated with true history of the territory, and the written history, other than Scripture, for the area of Palestine is exceedingly limited. Such a standard would take the form of at least a single mound occupied throughout the era in question whose strata could be identified unequivocally, either by correlation with written sources or otherwise. If such were available, then the corresponding strata in other mounds could be correlated on the basis of similarity of culture. But there *is no such standard mound*, and even if there were, this would not provide dates for the incidents of Scripture, except as a chronology in years had been established by independent means.
9. It is becoming more and more evident that not one of the proposed dating methods provides an unequivocal basis for dating archaeological finds in terms of the B.C. time scale, either directly or indirectly.[49] This holds true for the era prior to that marking the beginning of the period when dependable astronomical data are available.
10. Only in exceptional cases can pottery types (culture) associated with a destruction or reconstruction be identified in terms of the people who used the pottery. The principal exceptions are in the case of foreign potteries or when the same territory was occupied by the same people for such a long period of time that chronological errors do not vitiate the identification. But in the latter case, the changes in the pottery during the prolonged period may be so gradual and minor that it is not possible to assign even relative dates within the period more accurately than plus or minus a century. Wooley described the situation as follows:[50]

> I have talked of the "date" of Jemdet Nasr; it was a loose expression and perhaps I ought to retract it, certainly not to let it pass

> without a warning. The archaeologist can re-create a great deal of human history; he can bear witness to its vicissitudes, trace the progress of civilization, define the life of a city or of a nation by periods arranged in true historical sequence; but in the absence of written records, he cannot fix dates. We are always being asked "When did such and such an event happen?" We may know very well at what point in a sequence it occurred, but we cannot express our answer in terms of years. There is no empirical method of attaining such knowledge. The stratification of the soil of an ancient site does not go by mathematical progression; if each of the first three feet represents a hundred years, it does not follow that ten feet equal a thousand; they may stand for 400 or 3,000 years. The archaeologist may for his convenience talk in round numbers, but he is not really thinking in numbers at all, and if asked for dates he can only reply that he does not know. As we pass back, then, from history, which depends largely on written records, to pre-history, the archaeologist's peculiar sphere, we have to accept periods instead of dates, and racial movements instead of the exploits of individuals; it is an impressionist picture painted with a broader brush, but it is not necessarily less true.

While these remarks were made with primary reference to the prehistoric period, commonly made equivalent to the predynastic period, the principles apply to any era where there are no written inscriptions to guide in the interpretations, and this is true of the Palestine area down to a very late date.[51]

11. The least questionable type of archaeological evidence would be the cases of widespread destruction correlatable with a single incident. The reason why such evidence is less questionable is the fact that these were far more rare than destructions of individual cities and hence represent more unique incidents in the history of the territory. But Scripture is virtually the only source we have for the early history of Palestine which is adequate for making intelligent inferences as to correlation with history. When scholars accepted the premise that deviations of archaeological interpretation from data provided in Scripture are not necessarily matters of concern, they deprived themselves of the one source that could have served to prevent gross misinterpretations. As a result, the widespread destruction at the end of Early Bronze with its clear-cut change of culture is without identification that is more than guess-work, while that at the end of Late Bronze with no change of culture is erroneously correlat-

ed with the conquest by the Israelites where such a change of culture should be apparent.

Faced with these many difficulties as sources of potential error in attempts to correlate archaeological observations with the incidents of Scripture, the real question to be answered is not, How could it be possible for a total scholarship to make errors of the magnitude called for by the proposed revision? The question is rather, What chance was there for avoiding making errors of this magnitude?

As an inevitable result of the existing situation, Biblical Archaeology, which might have been a most valuable science, has allowed itself to deteriorate to the level of Scientism whose deductions have little significance beyond leaving a record of beliefs for the perusal of subsequent generations. The chances of making correct deductions on the basis of the accepted starting premises are virtually zero for the period prior to the 9th century B.C., with little better chance for the era of the next four centuries. In the remaining chapters of this volume, additional evidence will be presented in support of this contention.

Notes and References

(1) Vol. I, Chap. VII, Sect. II. (2) See Chaps. IX-XIV. (3) Vol. I, Chap. XVI, Sect. VI. (4) Chap. XVII, Sects. XIV-XVI. (5) Reference is to the synchronism based on the founding of Samaria. See Chap. XII. (6) B-TT, pp. 18ff.; K-G, pp. 16ff. (7) See bibliography of F-ABH, p. 360. (7a) Webster's New International Dictionary. This, however, is not the only or even the most commonly understood definition of the term. (8) B-AB, p. 28. K-BH, pp. 69ff.; U-AOT, p. 129; P-EOT, pp. 60ff. (9) Cited in B-AB, p. 28. (10) K-BH, p. 66. (11) Since they are said to be sand dwellers. (12) K-BH, p. 55; B-AB, p. 123; see *ibid.*, pp. 334-5 for a translation of this tale. (13) K-BH, p. 59. (13a) See ref. 13; Deut. 8:8. (14) K-BH, p. 59f. (15) *Ibid.*, p. 89. (16) Gen. 46:34. (17) Gen. 47:17; the original Hebrew word here translated flocks is the same as that in Gen. 46:32 (Y-AC). (18) Gen. 46:34; 47:6. (19) Gen. 41:43; K-BH, p. 86. (20) K-AHL, p. 181. (21) BASOR, No. 77, p. 31. (21a) F-LAP, p. 17. (21b) BASOR, No. 77, p. 31. (22) Plate II. (23) A-AP, p. 205. (24) *Ibid.*, p. 86. (25) U-AOT, p. 144, citing W-RFMK. (26) Vol. I, Chap. XIV. (27) See ref. 7. (28) See ref. 3. (29) J-AA, Bk. I, par. 15. (30) II Chron. 14:9. (31) II Kings 17:4. For identities of Zerah and So, see Vol. I, Chap. XVI, Sect. VII; Chap. XVII, Sect. XII. (32) See SDABC on I Chron. 5:26 for explanation of the apparent distinction between Tiglathpileser and Pul. (33) See Ref. 32. (34) B-BA, pp. 320 ff.; P-EOT, pp. 49-52; R-HBA, Vol. II, pp. 83, 84. (34a) See Chap. XVII on the placement of Hammurabi. (35) Basor, No. 77, p. 25; No. 79, p. 36; No. 99, p. 10; No. 126, p. 20; No. 146, p. 20. See also F-ABH, p. 33, note 54; F-LAP, p. 57, note 5. (36) F-ABH, p. 57, note 20; B-AB, p. 320. (37) Gen. 41:45, 50. (38) B-AB, p. 34. (39) *Ibid.* (40) Vol. I, Table V. (41) *Ibid.*, Chap. XVII, Sect. XIII. (42) L-ARAB, Vol. II, p. 442. (43) *Ibid.*, Vol. I, par. 58. (44) B-AB, pp. 204, 207; F-LAP, pp. 69, 70; F-ABH, pp. 136, 137; U-AOT, pp. 125, 145; K-AHL, pp. 193, 206-7, 213. (45) Vol. I, Chap. IV, Sect. III. (46) K-AHL, p. 32. (47) E-LDE, p. 16; M-SEC, p. 380; Vol. I, Chap. XIV, Sect. IX; this volume, Chap. V, Sects. IX, XV. (48) See quot. of ref. 50. (49) See Chaps. III, IV. (50) W-DP, pp. 78, 79. (51) See quot. of ref. 46.

CHAPTER III

LIMITATIONS OF CARBON-14 DATING

The carbon-14 method of dating was introduced by Dr. Willard Libby in 1948. The astute mind of this investigator recognized the possibility that the radioactive carbon to be found in materials which were part of once living organisms might be used to provide an approximate measure of elapsed time between the death of the organism and the present. The basis for such determinations is to be found in the origin and peculiar behaviour of Carbon-14 particles (atoms) as distinguished from normal carbon atoms which are given the label Carbon-12. For convenience we designate these two forms of carbon as C-14 and C-12 respectively.

I. Origin of C-14 Atoms

It is now common knowledge that this earth is being continuously bombarded from every direction in space by tiny positively charged particles known as cosmic rays. Some of these particles are residues of hydrogen atoms which have lost a negative charge (electron) to form units which have been designated protons. Others are residues of helium atoms which have lost two electrons. These charged particles have their origin in the explosive phenomena which occur in the surface of the sun and the numerous stars of the cosmic universe. When such explosions occur, many such particles are ejected beyond the attractive force of the parent star and begin their long journey through space until they come within the attractive force of another star or one of its satellites. Many of these charged particles come to us from outer space after long journeys from distant stars, though the more important source, as far as this earth is concerned, is from our sun.

When one of the helium residues from outer space collides with a nitrogen atom of our atmosphere, the atom may explode, yielding secondary cosmic rays designated as neutrons. Collision of one of these neutrons with another atom of nitrogen in the atmosphere may result in changes in the nucleus of the atom, converting it to a new atom having the properties of carbon atoms. These newly-formed carbon atoms differ from ordinary carbon atoms in two major respects. They have weights like nitrogen atoms and are one-sixth heavier than ordinary carbon atoms. Since the relative weight of ordinary carbon atoms is 12, these newly-formed carbon atoms have a corresponding weight of 14. Hence the term C-14. These C-14 atoms also differ from normal C-12 atoms in that they are radioactive. By this is meant that the atoms disintegrate spontaneously at a rate which is peculiar and unique to C-14 atoms. In this process of disintegrative decay, C-14 atoms revert to their original identity as nitrogen atoms and at the same time release an electron. The emission of this electron is detectable by the use of proper instruments. It is the measurement of the rate of emission of these elctrons that forms the basis for the C-14 method of dating.

Some C-14 atoms are very short-lived and disintegrate almost as soon as formed. Others have varying lives, some retaining their identity for hundreds and even thousands of years before disintegration occurs. The factor that determines the life-span of individual C-14 atoms is not known, and hence it is not possible to predict whether a given atom will exist for a fraction of a second or for a period measured in days, years, or millenniums. It is clear, however, that in dealing with large numbers of atoms in a statistical manner, one-half of these will decay in a period of about 5,600 years. Half of those remaining will disintegrate in the next 5,600 years, etc. This period of 5,600 years is called the half-life of C-14 atoms.

II. Rate of C-14 Disintegration as a Measure of Age

When C-14 atoms are formed in the atmosphere, they rapidly unite chemically with oxygen to become part of the atmospheric carbon dioxide of the air. These radioactive particles of carbon dioxide diffuse through the atmosphere, and many are eventually utilized by plants in the process of photosynthesis along with ordinary carbon dioxide. Some of these plants will be eaten by animals, and the radioactive particles are thus incorporated into animal tissues. When death occurs, either to the plant or to the animal, the interchange of C-14 atoms with the surrounding non-living world is presumed to cease,[1] and from this point on, the radioactive decay proceeds according to the time scale previously mentioned. It is then theoretically possible to calculate the elapsed time since the organism died by means of the half-life figure and the rate at which the remaining C-14 atoms are disintegrating at the present time. The measurement of the present rate of decay is accomplished by means of an instrument known as a nuclear radiation counter. With proper associated electronic equipment, the number of such disintegrations occurring over any desired period of time may be automatically counted and recorded.

In order to use this pheonomenon as a basis for dating any person or event of the past, it is first necessary to have a sample of once living material which can unquestionably be correlated in time with the person or event whose age is to be determined. Wood or charcoal from an ancient structure is a common starting material. The time measurement in this case represents the time the tree was cut down to the present and not the time from its incorporation into some structure or of its burning. However, since the method is commonly not more accurate than within about a century, this possible difference is often disregarded.

III. Inherent Limitations of the C-14 Dating Method

In considering the limitations of the use of the C-14 dating method, distinction should be made between errors inherent in the method and for which the limits of error may be defined, at least in an approximate manner, and errors which are due to factors as yet not sufficiently well understood to permit evaluation of the limits of error. Perhaps the most significant source of error of the first type is the limitation of the radiation counter efficiency. This shortcoming can be ameliorated to a degree by extending the normal measurement time (24-48 hours) to a much longer period, such as a month or more, or by taking an average of several determinations on the same sample. The practicability of these alternates is, however, limited by the necessary tying up of expensive equipment for longer periods of time and by the cost of skilled help.

In recognition of this limitation, the calculated ages from the determination are accompanied in the reports by an expression defining the probable limits of error. For example, an age may be given as X years ± Y years with a probability factor of 2 out of 3. This means that the chances are 2 out of 3 that the calculated age X does not deviate from the true age by more than Y years. To increase the probability factor to near certainty, the value of Y must be correspondingly increased. However, unless otherwise indicated, these stated ages have not allowed for any of the several other possible sources of error, which as yet have not been adequately evaluated.

Deviations in results from determinations made on different portions of the same sample may exceed the value of Y, indicating the existence of factors not yet understood or evaluated and which have not been taken into account in the reported results. One such factor is the degree of uncertainty in the figure used for the half-life of C-14. While values have been reported[2] from 7200 to 4700 years, the internationally accepted range falls between 5598 and 5538 years. However, more recently reported values continue to appear indicating a necessary recognition of a larger range of possibility. A value 5730 ± 40 years appears to have considerable support.[3] For dates in the era 2000 B.C., the additional correction from this factor would be 160 years. The fundamental difficulty in accepting without qualification the calculated ages from C-14 measurements is the fact that there still remain possible sources of error that fall in the unknown and unevaluated categories. While the following comments were made several years ago, their pertinence to the problem remains.[4]

> In order that a technique or discipline may be useful in scientific work, its limits must be known and understood, but the limits of usefulness of the radiocarbon age determinations are not yet known or understood. No one seriously proposes that all the determined dates are without error, but we do not know how many of them are in error — 25 %? 50 %? 75 %? And we do not know which dates are in error, or by what amounts, or why?

IV. Attempts at Evaluating the Validity of the Method

Since there are a number of factors involved in the use of the method that cannot be evaluated at the present time, and since some of the assumptions on which the validity of the method are based have not been established beyond question, it is required of such a newly proposed method that its validity be checked prior to an unqualified acceptance of the results obtained by it. This would require a comparison of known ages of samples with the results obtained from C-14 measurements on the same samples. Such samples should be well distributed over the entire era for which the method is to be used. When the method was first devised, it was believed that such samples of known age were readily available for such a check back as far as 30,000 years. It was somewhat of a shock to discover that this was not the case.[5] Available samples of usable material from antiquity whose dates were then regarded as established were rare indeed. In the mean time, even those few thought to be thus established with close approximation must now be returned to the "uncertain" category.

> The first shock Dr. Arnold and I had was that our advisors informed us that history extended back only 5,000 years. We had thought initially that we would be able to get samples all along the curve back to 30,000 years, put the points in, and then our work would be finished. You read books and find statements that such a society or archaeological site is 20,000 years old. We learned rather abruptly that these numbers, these ancient ages, are not known; in fact, it is at about the time of the first dynasty in Egypt that the last historical date of any real certainty has been established.

Unfortunately, it is now apparent that even this date for the beginnings of the historical era is not at all certain. The commonly accepted dates (3300-3000 B.C.) were obtained by reduction of the previously suggested dates in the 6th and 7th millenniums B.C., under the pressure of results from C-14 dating on samples from the era of Dynasty I. This reduction was feasible by revising the previous estimations on rates of change of culture and progress,[6] and hence is not a date that has any significance in the direction of confirming the C-14 method. Furthermore, evidence has been presented by Scharff, and is being accepted by an increasing number of scholars, that the date for the unification of Egypt under Mena should be reduced to c. 2800 B.C. As has been shown in the discussions of this work, a far more consistent chronology results when this date is moved forward by still another 600 years. Since the date for the beginning of the first dynasty in Egypt cannot be logically regarded as even approaching certainty, neither can any of the later dates be so regarded, until one reaches the period where unqualified confirmation is at hand.

While various archaeologists have expressed a recognition of the insecure basis on which these early dates rest, and on the insecure nature of the supposed confirmation by C-14 dating, these dates continue to be used as unqualified evidence in support of current views on ancient chronology. Dr. Libby's recent revision of his earlier work includes a chapter on the significance of radiocarbon dates.[7] The comments in this chapter by Frederick Johnson are based on a report on the *Program to Aid in Development of the Method of Dating.* Since the program was designed to *aid* in the development of the method, we may safely assume that the comments on the difficulties and insecurity of the method will not be overemphasized. It is thus of considerable interest and significance to note that Dr. Johnson recognized clearly the insecurity of the ancient dates proposed by archaeologists and historians based on estimated rates of change of culture and progress. He further recognized the nonusability of such dates as a basis for confirming the reliability of the C-14 dating results, except as these have been confirmed by an independent method. The tree-ring dating method was suggested as such a reliable and independent method. From this chapter by Dr. Johnson, we quote:[8]

> . . . Historical data, that is, measurements of time based upon a calendrical system and dependable written ethnohistoric record, appear to be directly comparable with the results of the radiocarbon method as expressed in number of years before the present. In other words, dates in both systems are referable to a single method of counting time. *This is not true of geological and archaeological measurements, except in relatively rare instances. Measurements of time in these fields are inferred from processes, the rates of change or progress of which are not constant* and which are, as yet, quite unpredictable. *There is no known standard rate for any one of these processes, and measurements of time for one process are invariably relative to rates of progress in other processes. It should be quite clear that inferred or relative dates of this kind and chronological frameworks made up of them are not standards of sufficient precision for judging in detail the validity of the radiocarbon.* It is a matter of historical record that archaeological sequences which have not been controlled by some method of counting time, such as tree-ring dating, have been assigned longer or shorter periods of time as various opinions waxed and waned in popularity, or as new data were presented. Similarly, in geology several different chronologies for the Pleistocene are variously based and have reputable proponents who are fully cognizant of both the strength and weakness of their position. *In view of this it is obvious that conclusions regarding the validity or error in a single date or a sequence of radiocarbon dates must be drawn with extreme care.*

> The second kind of problem in archaeology is more frequently concerned with later cultural material found in situations having physical characteristics which are almost wholly due to the fact of human occupation. In such locations stratification is present, but it is frequently impossible to identify it. Consequently, archaeologists augment scarce, definite stratigraphic data with inferences from internal evidence, such as the evolution of styles of pottery, changes in the form of tools, the shape of houses, etc. *The resulting chronological framework is of course very insecure and is recognized as such by any reputable archaeologist. The use of such must strain the credulity of investigators in allied fields, especially those in possession of more precise data.* [Emphasis ours.]

While Dr. Johnson proposes the tree-ring dating method as a secure and independent means of confirming dates (or a dating method), recent finds indicate that not even this method can be considered as yielding data usable for the establishment of dates. It is now recognized that under proper conditions a tree may elaborate more than a single ring in a year, three or four rings in a year not being uncommon. Trees growing on a slope where the water runs off rapidly to give a repetition of wet and dry periods may show a multiplicity of rings in a single year; even two sides of the same tree may reveal different numbers of rings.[9]

Extended investigations have been conducted in the direction of substantiating the premises on which the C-14 dating method rests. Certainly great strides have been made in refining the experimental method. The arguments presented by Dr. Johnson are convincing to the end that the inferred dates of archaeologists cannot be used as evidence that the data from C-14 measurements are other than valid. But by the same token, neither can these dates be used to confirm the method. Whatever confirmation of the method may be provided by data from materials of more recent date (within the stated limits of probable error), the method remains unconfirmed by the data provided by either archaeology or geology. As for the degree of confirmation provided by the deductive methods,[10] it is here contended that there still remain unevaluated factors that may require gross corrections in the interpretation of C-14 data. On this basis, it is further contended that there are no data, either from the inferred dates of archaeologists or from the C-14 dating method that provide any valid basis for challenging the altered chronological structure proposed in this work. This altered structure should be evaluated on its own merits as revealed by its internal consistency and by the large number of problems in the conventional views that are provided solutions by it.

V. The Effects of Decrease in the Earth's Magnetic Field on the Interpretation of C-14 Data

The earth is a huge magnet with its poles not distantly located from the poles of the axis of rotation. Being a magnet, there exists a magnetic field about the earth just as for the artificial magnet, and the laws describing the behaviour of a small magnet apply on a larger scale to the earth. A magnet will deflect the movement of a charged body entering into its field of activity. This is readily demonstrated by fastening a charged pith ball on a thread and bringing the suspended ball into the magnetic field.

The cosmic rays responsible for C-14 formation are charged particles in rapid motion. When they approach the earth's magnetic field, they are similarly deflected from their previous direction of motion. As a result, many of these particles that were moving toward the earth will be deflected so that they never enter the earth's atmosphere. The fraction thus sufficiently deflected depends on the strength of the earth's magnetic field. Hence any change in the magnitude of this factor over the period of usage of the C-14 dating method will yield C-14 age determinations different from the results to be obtained if this factor is taken into consideration.[10a] If such a change in the magnitude of the magnetic field were in the direction of an increase, a failure to consider this factor will yield age values that are too low; if the change has been in the direction of a decrease, then calculations as currently done will yield exaggerated ages.

It is now known that the strength of the earth's magnetic field has been *decreasing* over the past centuries. The decrease observed for the period of the last 100 years amounts to about five per cent;[11] the decrease from Roman times was found to amount variably from 35-65 per cent.[12] The method of determination is relatively simple. Some clays of which ancient bricks were made contain magnetizable particles. If the bricks were made by heating to the proper temperature, followed by cooling, these particles would align themselves along the lines of magnetic force of the earth and form a magnet whose strength is related to that of the strength of the earth's magnetic field at that specific point. If such bricks are reheated today, the magnetism is lost, but on cooling the magnetizable particles again realign themselves in the direction of the lines of magnetic force to form a new magnet whose strength is now related to that of the present strength of the earth's field. A comparison of the two results will indicate any change in the strength of the magnetic field over the interim between the two measurements.

Calculations have been made as to the extent of the necessary correction in ages determined by the C-14 method which have not taken this factor into consideration. Such calculations indicate a needed correction of some —250 years on reported ages for materials from the time of Christ.[13] For materials from the era 1000 B.C., the correction increases to —500 years and for the era 2000 B.C., the correction amounts to a full millennium.[4] Such a correction, if additive to the inherent error in the method, can be very significant. Discrepancies on materials of known age for the Christian era may be explainable in part on the basis of failing to take this factor into consideration. On the other hand, if the inherent error is compensatory to the error due to the change in the earth's magnetic field, the age calculation for the Christian era may well approach a correct value, thus explaining the apparent agreement with known ages by many analyses. The difficulty in assigning values to samples of unknown age is that it is not possible to tell whether the two sources of error are additive or compensatory. When one adds to this uncertainty the possible error due to uncertainty on the length of the half-life period for C-14, it is not difficult to envision total errors on material from the early dynastic period amounting to well over a millennium, with little room left indeed for explicit confidence in the ages provided for materials from the pre-Christian era except as these may, by compensation of errors, be shown by independent data to approach a correct age.

VI. Changes in the Atmospheric Content of Carbon Dioxide as a Factor in Interpreting C-14 Data

A fundamental assumption on which the C-14 method of dating rests is that the specific activity of C-14 (the number of disintegrations per minute per gram of pure carbon)[14] has not changed significantly over the period of the last 30,000 years or so. The specific activity of C-14 could be considered as having changed if (1) the rate of C-14 formation had changed, (2) if the rate of C-14 disintegration had changed (i.e., if the half life had varied), or (3) if the carbon dioxide content of the atmosphere had changed. While the rate of influx of cosmic rays does fluxuate with solar conditions, it may be supposed that the periodic explosions on the surface of the sun have not significantly affected the *average* rate of C-14 formation,[15] and the assumption that the rate of disintegration of C-14 has not changed may be accepted as at least a tentative conclusion.

The possibility of changes in the carbon dioxide content of the atmosphere is quite another problem. If samples had been available over the period to which the C-14 dating method has been applied and it had been found from analysis of such samples that known ages agreed with the ages calculated from the experimental data, it would then have been reasonable to conclude that this factor had not been disturbed in a manner or degree that would warrant questioning the validity of the method. In the absence of such samples of known age as a check, Dr. Libby and associates recognized the necessity of corroborating this assumption of constancy by other means. Direct experimental evidence was, of course, not attainable. Hence extensive efforts have been made to confirm this fundamental assumption by deduction methods.[16]

To arrive at any sort of conclusion, it was necessary to attempt evaluations of the numerous factors that could result in such a change in the carbon dioxide concentration of the atmosphere. Such factors include the rate of use of carbon dioxide by total plant life, the rate of formation by total animal life, the rate of production by combustion of organic materials both by controlled and uncontrolled processes, the rates of formation and decomposition of carbonate minerals, and the problem of equilibrium between atmospheric and sea-water carbonate. On the basis of calculations based on deductions relative to these various factors, it was concluded that this factor had not changed significantly during historic times though possible changes in the prehistoric period were considered as not eliminated.[17]

> . . . Considering the matter empirically, we are apparently justified in saying that, whatever the reasons, the specific activity of living matter has not changed significantly in historic times, and the problem resolves itself into consideration of possible variations restricted to the prehistoric period encompassed by the radiocarbon dating method.

There are convincing evidences indicating that the carbon dioxide content of the atmosphere *has not* been constant through the past ages.[18] The larger question, as recognized in the above quotation, is whether this situation has existed at any time during the historic period to which the C-14 dating method has been applied or whether it belongs in its entirety to an earlier period of this earth's existence.

VII. Some Considerations Regarding the Carbon Dioxide Shift Based on Scripture

It is assumed that the author of the above quotation is using the terms "historic" and "prehistoric periods" as essentially equivalent to the terms "dynastic" and "predynastic periods." If this is what is meant, then we are inclined to agree that any major changes in atmospheric carbon dioxide belong primarily to the prehistoric era; however, we believe that the change occurred at no long period of time prior to the beginning of the dynastic period and that its effects may well have continued into the dynastic period in a continually decreasing degree. These concepts rise from deductions from Scripture taken as it reads and from evidences of other extensive changes currently assigned to the late geological ages.

Deductions made on the basis of the philosophy of uniformitarianism, which philosophy is in direct antipathy to Scripture, tacitly assume that this is the only approach to the solution of scientific problems meriting consideration. On this basis, no room is left for questioning the conclusion that recognizes a period supposedly measured in a multiplicity of millenniums between the beginning of the so-called Mesolithic and the dynastic period, with another half million years for the Palaeolithic. In terms of the comments by Dr. Johnson (quot. 8), it is here held that these figures for the duration of the period in question represent an extreme example of deduction on the basis of inferred rates of change of culture and progress. It is incredible to suppose that it required a multiplicity of millenniums for man to encompass the observed progress over this period. If man had the know-how to make a scythe and an arrowhead (for food "gathering"), he was also intelligent enough to make rapid progress into a program of food "raising." The intelligence was there; at most it was only a matter of climate that delayed progress.

The assumption that the ice age continued for a period of half a million years or so is another example of gross error in estimating rate of change. Rate of change here depends on conditions, and without a knowledge of those conditions, estimates are mere guesses based on one's starting philosophy. Dr. Johnson continued:[19]

> . . . In geology, some but by no means all criticisms of the radiocarbon dates are based upon inferences concerning the behaviour of the presently nonexistent ice sheet. There is no way of proving or disproving assumptions concerning the speed of advance or retreat of the ice, the degree of precision of a varve record and its correlation with the calendar, or the significance of the modification in the vegetation.

Has any one who holds to the view that such long periods were required for minor degrees of cultural progress ever tried to make an arrowhead out of flint, even given all the advantage of modern hand tools? It is absurd to presume that once the art of making an arrowhead was known, that it took a multiplicity of centuries to learn the art of food production, or to learn how to make some slight change in the style or decoration of a pot. Such changes could have occurred over night. The factors that determined the rate of progress from the beginnings of the so-called Mesolithic to the historic period as deduced from Scripture are to be quite differently identified than in terms of a developing intelligence at an imperceptibly slow rate.

As with the faulty estimation of rate of change of progress culturally, so also the rate of change of physical conditions has been grossly underestimated as a result of failure to recognize a world-wide catastrophe separating the Paleolithic from the Mesolithic. Recognition of the factual nature of the Biblical account of the Noachian flood provides an explanation for a relatively rapid change in the carbon dioxide content of the atmosphere. The relatively sudden appearance of vast volumes of water on the surface of the earth that were not in previous equilibrium with atmospheric carbon dioxide would represent an immense factor in producing a large decrease in atmospheric carbon dioxide in a relatively short period of time.[20] So also a drop of even a few degrees in the average temperature of this water would be a further large factor in the same direction.[21] At the same time, an explanation is provided for the failure to discover any cultural connection between Paleolithic man and Mesolithic cultures.[22] By this thesis, most evidences of Paleolithic life should be associated with the destruction at the time of the Genesis flood.

These deductions from Scripture provide solutions to numerous problems. Some of these are discussed in another chapter of this work,[23] where the problem of the rapid formation of early mound sites is considered. We are interested here in the solutions provided to problems relative to the C-14 dating method.

In the early efforts to belittle the nature of the incident of the Noachian flood, the Higher Criticism has read into the flood story that which is not there, and has disregarded the statements that are there. Much has been made of the impossibility of enough rain falling to cover the entire earth with water above the highest mountains. This deduction, we grant. But Scripture does not say that all the waters of the Flood resulted from falling rain. It states that the "fountains of the great deep were broken up,"[24] and we may take this to mean that prior to the Flood, most of the flood waters existed as subterranean water. Furthermore, there is no basis for the supposition that the antediluvian geography was characterized by mountains with heights like those that now exist.[25] Evidently these subterranean waters circulated through a vast system of caverns of which those at Carlsbad may be extant remnants, others having collapsed by the added pressure of the new waters on the surface. That some different system for providing moisture to vegetation was present in the antediluvian world is confirmed by the statement of Scripture that there was no rain during this period as we now know rain.[26]

There is no reason for supposing that this subterranean water supply was previously in equilibrium with atmospheric carbon dioxide, and without carbon dioxide in the water, there would be no significant amount of carbonate in the water since calcium carbonate (as the main source) is virtually insoluble in water. When these waters poured forth onto the surface of the earth as flood waters, an immediate process of equilibration with atmospheric carbon dioxide began and with the dissolving of carbon dioxide, carbonate minerals would attain a degree of solubility, these processes continuing until a new equilibrium had been established. While the initial phase of these changes may well have occurred during the actual period of the Flood, equilibrium may well have required a matter of several centuries, possibly extending into the historic period. By this premise, the errors in dates provided by C-14 data will be maximum for the era between the Flood and historic period. Since dates based on assumed rates of change can be in gross error, it is not outside logical reasoning to assume a far shorter predynastic period than that assumed by popular views.

VIII. On the Expected Effects on Climate from a Higher Atmospheric Content of Carbon Dioxide

That even minor changes in the carbon dioxide of the atmosphere have a detectable effect on climate has long been recognized. The principle was first stated in 1861 by the British Physicist John Tyndall and has been succinctly stated thus:[27]

> . . . He [Tyndall] attributed the climatic temperature-changes to variations in the amount of carbon dioxide in the atmosphere. According to the theory, carbon dioxide molecules in the air absorb infrared radiation. The carbon dioxide and other gases in the atmosphere are virtually transparent to the visible radiation that delivers the sun's energy to the earth. But the earth in turn reradiates much of the energy in the invisible infrared region of the spectrum. This radiation is most intense at wavelengths very close to the principal absorption band (13-17 microns) of the carbon dioxide spectrum. . . . Because the carbon dioxide blanket prevents its [infrared radiation] escape into space, the trapped radiation warms up the atmosphere. . . . Thus throughout most of the atmosphere carbon dioxide is the main factor determining changes in the radiation flux.

This principle of a "green-house" effect of carbon dioxide in the atmosphere has been of primary interest to investigators from the standpoint of minor changes that might result from increased commercialism and increased destruction of forests. Interest here is extended to the evidence pointing to a once notably warmer climate on the earth than now. From the same treatise as that providing the quotation above, we read further.[28]

> The present capacity of plants to consume carbon dioxide in photosynthesis gives us an interesting clue to the carbon dioxide content of the atmosphere in bygone ages. Plants are almost perfectly adapted to the spectral range and intensity of the light they receive, yet they grow far more rapidly and luxuriantly in an atmosphere that contains five to 10 times the present carbon dioxide concentration; in fact, florists sometimes release tankfuls of carbon dioxide in green-houses to promote plant growth. The present carbon dioxide concentration in the atmosphere must therefore be unusually low.

These facts were interpreted to tell us that the earth's climate was warmer during most of geologic time and contained a much higher percentage of carbon dioxide. This conclusion is reasonable, except for the assumptions relative to the interpretation of the past history of the world in terms of the so-called geologic ages. The same facts may be interpreted in terms of the catastrophe theory which recognizes the flood of Noah as the upsetting and sudden factor to be dealt with.

By this theory, this much higher concentration of carbon dioxide was the natural condition that existed from pole to pole in the antediluvian world. If we grant that this world had far less by way of surface water than now, and that the arrangement was such as to provide water and air currents from the tropical regions into the polar regions to yield a near-equivalent temperature in all regions, we have the necessary conditions to provide such a climate.

But if this was true, then this situation should be revealed archaeologically or geologically by the evidence of tropical or subtropical plant life in the polar regions.

IX. The Problem of a Once Tropical Climate in the Polar Regions

The discovery of fossils of tropical plants in the polar regions has long been a matter of puzzlement for which popular views have not provided any satisfactory explanation. One theory assumes that the land and water masses of the earth are slowly floating about on a liquid or semiliquid core, and that areas now at the equator were once at the poles and *vice versa.*[29] Another theory would assume that the axis of the earth's rotation is now differently aligned relative to the sun than was true at some former age. Both these theories have been thoroughly examined by astronomers and physicists, who find such explanations incredible. Though the theory of drifting continents has been resurrected of late, the purpose has been to support the theory that the land masses of the Americas were at one time united with the land masses of Europe and Africa. Such a theory if provable (which it is not) would have no bearing on the problem of climate at the poles. The astronomer Hoyle has commented on these theories thus:[30]

> How then could this [the warm climate at the poles] have happened? Not I think through the continents floating around on the surface of the Earth, being sometimes in one place and sometimes in another. How a continent composed of rock some 35 kilometers thick could contrive to move about is something that has never been explained, and until some plausible reason is offered in its support, we need scarcely take the notion of "drifting continents" at all seriously. Nor can we accept the idea that the Earth's axis of rotation, the axis that determines the climatic zones, was differently aligned in the past than it is now. . . . The tilt of the axis of rotation cannot have altered by any appreciable margin since the time of formation of the Earth.

The reason why the concept of floating continents as an explanation of the tropical climate at the poles is totally out of the question is the fact that the equatorial diameter of the earth is 27 miles greater than the polar diameter. For any shift between the polar and equatorial regions to occur, this entire bulge of 13.5 miles in thickness around the earth must somehow have been transferred from what are now the polar regions to what is now the equatorial region. This concept hardly fits into the frame of uniformitarianism.

Hoyle preferred the alternate explanation that the earth may have turned relative to its axis of rotation much as a lump of soft butter would shift relative to its axis on a rotating skewer. Hoyle recognized, however, the this theory still leaves unexplained how such a reorientation might happen to an earth that is anything but soft.

How much more credible is the concept that this situation of a tropical climate in the polar regions was the direct result of a notably higher concentration of carbon dioxide in the atmosphere, probably associated with a more efficient system of water and air currents to shift much of the equatorial heat into the polar regions to make possible a near-equitable climate over the entire earth! While there may well have been seasonal changes in the polar regions, these may well have been no greater than in the pleasantly temperate regions at the present time.

X. Other Severe Changes to Be Associated with the Flood

By the thesis outlined above, the geological evidences of other severe changes now placed at the juncture of the Paleolithic with the Mesolithic also belong to the Flood era. These evidences are provided a more satisfactory position following the catastrophe of the Flood than is possible within the framework of uniformitariansim. A very significant fact to be associated with the shift in the carbon dioxide concentration of the atmosphere is the observation forcing the conclusion that mountain formation must be delayed to the very end of the geological ages. Reference is to the observation that geologic strata containing fossils of the very youngest order have been found on the tops of mountains. This observation is even more significant in the light of the fact that geologists would prefer to recognize mountain formation as a gradual process, occurring throughout much of the period of the geologic ages.

The placement of this phenomenon very late in geologic time indicates that changes of cataclysmic magnitude were involved. The paucity of comment on this point in the geologic discussions suggests that it is not a topic for welcomed discussion. By the alternate approach, much of the phenomena of mountain formation resulted from erosion during the period of subsidence of the Flood waters, and at the same time an explanation of the evidences of violent water action is provided. Such rapid erosion could be expected to have occurred as the water flowed into the depressions resulting from the collapse of vast areas that previously held subterranean water. Thus the extremely broken surface of the ocean bottoms, as has been recently observed, is explained. However, mountain formation cannot be explained solely on the basis of erosion. The observed tilting of strata over large areas indicates that this process involved enormous fracturing of the earth's surface, accompanied by widespread volcanic action. The failure to find any cultural connection between Paleolithic man and Mesolithic man provides further evidence that the two were separated by a world-wide catastrophe.

The shift in atmospheric carbon dioxide to the present composition was not sudden; but neither did it occur gradually over a period of many millenniums. It may have taken several centuries for a new equilibirum between water and atmospheric content of carbon dioxide to be established. During the late stages of this period of change, the seasonal changes could be expected to become more and more severe. It is quite possible that in the border-line areas between those of permanent ice and those of more temperate regions, there were periodic releases from the more severe climatic conditions. The recurrent "ice ages" should be thus interpreted. These changes, as pointed out by Johnson, [31] are changes that cannot be converted to a calendrical system. It would appear that one factor in the climatic change following the Flood was a much heavier rainfall than is now known on the earth.[32]

The C-14 data on coral deposits provide a further confirmation of the general picture. Coral represents the skeletal remains of ocean creatures that lived a sedentary life in waters suitable to their growth, thus forming continuous deposits of skeletal remains. Coral is largely made up of calcium carbonate, and since this material was once living, it is susceptible to C-14 analysis. As such determinations are made on samples starting with the more recent deposits and proceding to the older formations, the assigned ages retreat to values of c. 10,000 years, at which point the values remain essentially constant (within the sensitivity of the method of anlysis) for all but the very oldest samples, which then again are remnants of the antediluvian world. The value c. 10,000 provides a clue to the approximate error in ages by C-14 data from materials that died at the time of the flood.

Notes and References

(1) This is one of the fundamental assumptions of the C-14 dating method which has been questioned as to its validity (BH-SA, p. 47). (2) L-RD, p. 35. (3) *Ibid.*, p. x. The difference amounts to about 4 per cent. (4) Cited in WM-GF, p. 372. (5) See ref. 4. (6) See quot. of ref. 8. (7) Chap. V. (8) *Ibid.*, pp. 143, 147. (9) For further data on this critical point, see articles by Glueck and associates (*Bot. Rev.*, Vol. 7, pp. 649-713; Vol. 21, pp. 245-365; *Endeavor*, Vol. 22, pp. 9-13. (10) Details for this series of deductions are given in L-RD, Chap. II; see also

Willis in BH-SA, Chap. II. (10a) Libby leaves a note of recognition of this factor in the addenda (L-RD, p. ix), but there is no indication that any need for correction of dates is recognized. (11) *Sci. Amer.*, Vol. 198, p. 47. (12) *Ibid.*, Vol. 196, p. 64. (13) *Nature*, Vol. 178, p. 227. (14) L-RD, p. 10 (graph). This is another of the more controversial assumptions of the C-14 dating method BH-SA, p. 47). (15) L-RD, p. 8. (16) *Ibid.*, Chap. II; BH-SA, Chap. II. (17) L-RD, p. 33. (18) *Sci. Amer.*, July 1959, pp. 41-47; *Amer. Sci.*, Vol. 44, pp. 320-26. (19) L-RD, p. 148. (20) Since water dissolves many times as much as the atmospheric concentration; see ref. 18. (21) As pointed out by Pearl (M.A. Thesis). (22) K-AHL, p. 36. (23) See Chap. VIII of this volume. (24) Gen. 7:11. (25) By popular views, mountain formation belongs very late in the geological ages. The phenomenon is commonly explained on the basis of water erosion, which may be very true in many cases. However, the evidence of violent disturbance in the strata by extreme tilting makes it incredible to regard this as the only factor involved. The finding of fossils, belonging to the very young geological ages, on the tops of mountains makes it imperative to place this phenomenon this late. The subsidence of the Flood waters and the expected geologic disturbances from the redistribution of pressure provide a satisfactory explanation of these observations. (26) Gen. 2:6. (27) See ref. 18. (28) *Ibid.* (29) H-FA, p. 12. (30) *Ibid.*, pp. 12, 13. (31) See quot. of ref. 8. (32) See ref. 22.

CHAPTER IV

LIMITATIONS OF THE ASTRONOMICAL DATING METHODS

The problems involved in setting up a credible chronology of the ancient world are immense. This fact is indicated by the failure of any of the twenty or more outstanding historians of the last half-century to propose a chronology which would be generally acceptable to his associates.[1] At times, the discrepancies in the opinions of these various authorities are so marked as to make one question the possibility that a credible chronology of the ancient world will ever be produced. In any case, the problem is sufficiently complex to make desirable the use of any and all tools which can be devised to assist in arriving at results as close as possible to truth.

But in so doing, it must always be kept in mind that the use of tools which are not valid can well result in conclusions which only serve to obscure the truth. It must not be forgotten that the task of historians is not to create history. The events of history have occurred, and there is nothing that can be done to change the time relationships between these events by a single minute. The task is rather that of unraveling the confused records which have come down to us, and when this task has been done correctly, it is axiomatic that it should not be necessary to apologize for inconsistencies and anomalies at every turn of events.

To be sure, allowance must be made for the often unreliable records left us by the ancients, who failed to distinguish between facts and fiction or between truth and their own opinions. To be sure, our lack of complete information may leave events in one area which cannot be unquestionably related to contemporary events in adjoining areas. But it may be expected that insofar as information is available, a correct chronology of the ancient world will show a discernable harmony at every point where it is possible to check and will certainly be free of major synchronistic failures.

1. Dating Historical Events from Eclipse Data

One of the tools which has commonly been employed to assist in arriving at the traditional structure of ancient chronology is the dating of events by means of coincident astronomical phenomena. While most of us are not sufficiently versed in the science of astronomy to understand how the calculations are made, we accept the predictions of astronomers when we are told that on such a date and at such an exact time of day, an eclipse will begin which will be observed as total in a certain specified area. So exact are these calculations that large sums of money and much effort are expended in locating suitable optical equipment at the most desirable point for observation of the phenomenon, and this is done with complete confidence that only the weather can interfere with the observations as planned. This is possible because of the unerring motion of the heavenly bodies and the validity of the methods of calculating the relative motions.

Just as future eclipses can be predicted for a given time and for a given location, so also it is possible to calculate backwards and determine the exact time and location of eclipses of the past. Hence, if a record of antiquity associates an eclipse with some specific historical event or with some specific year of a king's reign, it is then theoretically possible to date that event in terms of the present calendar or of any other calendar which has a proven relationship to the presently used calendar.

It might be expected that with such a tool at our disposal, the last difficulties in setting up the broad and general outlines of the chronology of the ancient world would be removed. This has obviously not been the case, or there would be no major chronological problems left unsolved. The failure of eclipse data to provide the expected unquestionable structure results primarily from the paucity of satisfactory eclipse records from these early eras, for if the information obtained from such records is to be of any genuine value in problems of chronology, certain limiting critera must be met. It is not commonly possible to define, for any given case, the exact minimal data which must be available. If certain data are missing or inaccurate, then other data must be more exactly known.

In the first place, it must be known whether the eclipse record refers to an eclipse of the sun or of the moon, for an eclipse of the sun would not necessarily be visible at the same place or on the same date as an eclipse of the moon.

The practical difficulty here is not so much a matter of knowing whether a given record refers to one or the other as in knowing for sure whether a given record refers to an eclipse at all for some of these early inscriptions are vague indeed. As an example of such, we take the inscription from the time of Takelot II of the XXIInd Egyptian Dynasty which reads:[2]

> "When now had arrived the 15th year, the month Mesorii, the 25th day, under the reign of his father . . . *the heaven could not be distinguished*, the moon was eclipsed (literally *was horrible*), for a sign of the (coming) events in this land; as it also happened, for enemies . . . invaded with war the southern and northern districts (of Egypt)."

The historian Brugsch was very positive in interpreting this inscription as referring to a total eclipse of the moon, and others have joined him in this opinion.[3] It must be admitted, however, that the inscription does not say so, and other authorities have objected to such an interpretation.[4] We have here a case of vagueness which does not permit any unequivocal interpretation from the internal evidence, and any conclusions on the dating of Takeloth II based on this inscription must be considered as questionable. Manetho records a similar case in the reign of Necherophes of Dynasty III. He notes that:[5]

> . . . In his reign the Libyans revolted against Egypt and when the moon waxed beyond reckoning, they surrendered in terror.

This reference might be to the moon coming out of full eclipse, but it is also possible that some other phenomenon is referred to, or that Manetho misinterpreted the data before him from which he was quoting.[6] It should be apparent that such references are quite useless as a basis for providing data for chronological purposes.

Just as it is possible to calculate the exact time and area of observation of a future eclipse, by the same token, in order for an eclipse record of the past to be dated exactly and with certainty, it is necessary that the eclipse record tell us the position of the observer and the time of the day at which the eclipse occurred. It may also be important to know whether the eclipse was partial or total. In the absence of such complete data, it is readily possible that an eclipse record might be confused with quite a different actual eclipse, unless the associated incident can be closely dated by independent means, for it is elementary that an eclipse observed as total in one area will be visible only as partial in areas not too far distant. Furthermore, a total or near total eclipse may be observed in almost any general area of the earth's surface over a period of one hundred years or less.

It follows that an eclipse record which fails to provide sufficient data, or which is associated with an historical event which cannot be dated closely by independent means, may be quite useless as far as providing a basis for refining the date of the event in question. The possibility also remains that the associated event has been misdated due to an erroneous interpretation of the evidence. In such a case, the eclipse record could well serve to introduce confusion instead of eliminating or clarifying it. Since the eclipse records of antiquity, more often than not, fail to provide exact data on these crucial points, the method of dating historical events on this basis resolves itself to one which is of value only in refining dates which are already closely approximated with a considerable degree of certainty.

As an example of the confusion which might arise from attempts to date events by means of eclipse data, we take the case of the Great Eclipse of the Assyrian records. This eclipse occurred in the 10th year of the reign of the Assyrian king, Assur Dan III, and the record has traditionally been interpreted to refer to a total eclipse calculated to have been visible in the vicinity of Ninevah in 763 B.C.[7] On the basis of this interpretation, the 10th year of the reign of Assur Dan III has been set straddling this date and the adjoining chronology of Assyria has been set in turn to meet this dating. However, some scholars have seen difficulties rising from this dating of Assur Dan III, and have proposed that the eclipse record does not refer to the total eclipse of 763 B.C., but rather to a partial eclipse visible in the same area in 791 B.C.[8] The very fact that it is possible for scholars to juggle eclipse data in this fashion should indicate to us clearly that the incomplete data provided by these ancient references make them susceptible to more than a single interpretation and that the data may be made to fit into more than a single chronological structure.[9]

While these limitations on the usefulness of eclipse data hold for individual eclipse records, it should be noted that a record of a series of eclipses in sequence may serve as its own check. Such a series of eclipses was set up in the second century B.C., representing eclipses during the era from 721 to 491 B.C.[10] This series of eclipses has been found by calculation to match in unequivocal fashion the series of eclipses visible in this area over the period noted. With the numerous synchronisms between Biblical history and the histories of Egypt and Assyria for this era, the chronology of antiquity after the 8th century B.C. may be regarded as firmly established, the remaining problems having to do largely with refinement of certain dates.

This question of immediate interest here has reference to the number of eclipse records prior to 763 B.C. which may be regarded as unequivocably datable by means of calculations backwards in time. In answer to this question, it must be candidly admitted that there is not a single eclipse record of antiquity prior to 763 B.C. which can be thus characterized, if one grants that there is no reasonable question on the dating of the Great Assyrian Eclipse.[11] Thus a method which theoretically might have served as a powerful tool in setting up the broad outlines of ancient chronology is reduced to one whose sole value has been that of refining a few dates in the era of the 8th century B.C. and later where there is rather abundant independent supporting evidence for the chronology.

II. Meyer's Theory of Historical Dating from Sothic Data

In addition to eclipse records, other types of astronomical data have been used in attempts to date ancient historical events or eras. Most notable of these is the use of the so-called Sothic period.[12] The Sothic theory presumes that the Egyptians used a calendar year of 365 days, without interruption, as far back as the Vth Dynasty or earlier. Since the true solar year is more exactly 365 ¼ days, the New Year of such a calendar would wander backward through the seasons at the rate of one day every four years. Thus in 4 x 365 or 1460 years, the New Year's Day would return to its original position with reference to the seasons. This is the

Sothic period. The theory of Sothic dating further presumes that the Egyptians had, by observations, determined the length of this period by noting the time required for a given star (Sothis) to appear on the horizon at sunrise on New Year's Day after its similar previous appearance 1460 years earlier, and that the Egyptians had used this 1460 year period as a sort of long range calendar. Thus if an historical event is dated by its position in the Sothic cycle, it becomes theoretically possible to calculate the corresponding date on the B.C. time scale, providing the date for the beginning of any Sothic cycle is known.

This concept of using the Sothic period as a basis for dating historical events of the ancient world was first proposed by Lepsius (1810-1884), but the development of the method belongs to later workers (Mahler, Borchardt, Meyer, and Weill). Meyer is commonly credited with the specific statement of the theories involved. From calculations based on these theories, Meyer pointed to the year 4240 B.C. as the earliest fixed date of ancient history.[13] This date was purported to be the date for the introduction of the Sothic calendar in Egypt. Since other thousands of years must be hypothesized for the Egyptian to make the necessary observations to initiate the calendar, we are led far back into a presumed antiquity of civilization in the Nile Valley.

The history of this theory since its inception has been a checkered one indeed. The opinions of authorities on its validity have varied from complete rejection of the concept as providing any basis whatever for dating ancient events through a tacit acceptance in the face of much contradictory evidence, to a position of complete domination of the thinking of historians in a superlative manner.[14] As one looks backward in retrospect on the history of this concept of Sothic dating, and more specifically to the conclusion of Meyer that the Egyptians introduced a calendar in Egypt in the year 4240 B.C. based on this concept, one should be led to appreciate that modern historians are not at all immune to making mistakes of a major nature, and that human reasoning falls far short of being able to cope with the problems of ancient chronology once separated from the fundamental source of truth.

We are reminded of the ridicule which has been so freely heaped upon Ussher, the Biblical chronologist of some three centuries ago, who made the error of imposing unsound theories onto what was otherwise a brilliant piece of work. Realizing that Bible chronology logically led him to a date approximating 4000 B.C. for Creation, he theorized that the elapsed time from Creation to the appearance of the promised Messiah must be exactly 4000 years. Noting that the birth of Christ had, in error, been placed four years too late, he set the date for Creation in exact fashion as having occurred in 4004 B.C. For this bit of unsound supposition, the chronology of Ussher, so long accepted, has been the butt of ridicule during the last century or more by those who reject the historicity of the early chapters of the Bible, not because this chronology is so far out of line with that provided by the Scriptures, but because he presumed to thus exactly set a date for which there was only an unsound theoretical basis.

It has been tacitly assumed by modern scholars that errors of this type and magnitude are no longer possible because of man's improved grasp of the principles of logic and reasoning. The error of Meyer in setting the date 4240 B.C. as the date for the presumed introduction of the Sothic calendar in Egypt represents a mistake of far greater proportions than that made by Ussher and this in spite of the three centuries advantage in time.[14a]

While a number of prominent authorities have rejected the theories of Meyer and his associates as providing any reliable basis for the dating of ancient historical events, it remains a fact that these theories have continued to dominate the traditional structure of ancient chronology. It is thus in order to re-examine critically the theories and assumptions on which this method of dating is based. In order for the calculations of Meyer, and related conclusions based on the Sothic method of dating, to be worthy of credence, the following points should be shown to stand on solid ground: (1) The date for the beginning of some Sothic period must be known with certainty; (2) The identity of the star, Sothis, which ancients used to mark the Sothic period, must be known with certainty; (3) The calculations involved must be valid; (4) It must be clear that the Egyptians used the Sothic cycle in the manner presumed by the theory; (5) It must be known that the calendar of Egypt remained unchanged, both in the length of the year and in the position of the months of the year, over the period in question; (6) The references from the ancient records, used to support the theory, and conclusions based upon this theory, must be sufficiently clear as to permit but a single interpretation; (7) The application of the theory to the problems of historical dating must not lead us into anomalous situations; (8) All of the data available relating events to the Sothic period should fit satisfactorily into the theory.

While a failure to establish any one of these points should be regarded as placing the theory on other than solid grounds, it is here proposed to show that the theory is found wanting on every one of these major points. The date for the beginning of a Sothic period is not known with certainty; the identification of the star, Sothis, with Sirius cannot be unquestionably established, and evidence is at hand which is definitely contradictory to this conclusion of identity; the calculations used are not valid; it is quite out of the question that the Egyptians used the Sothic period in the manner assumed by the theory; there is abundant evidence that the Egyptian calendar did not remain unchanged during the period in question; the ancient records fail to provide a single inscription which can be unequivocally interpreted to support this theory of dating; the application of the theory has led us into a chronology which, at best, can only be evaluated as uncertain and characterized by altogether too many anachronisms to be regarded as even approximately correct. It should be carefully noted that in the report of the *Program to Aid in the Development of the C-14 dating method,* it was pointed out that when judged by scientific standards worthy of the name, the ancient dates proposed by archaeologists and historians remain hypothetical.[14b] These dates, which are tightly bound to the Sothic dating scheme, were regarded as having no value at all for evaluating the data from C-14 analyses, except as individual cases can be confirmed by an independent and unequivocal method. The only suggestion of such a suitable method for confirmation was by means of tree ring data.[14c] But even this method has now been shown to provide only questionable data.[14d] The Sothic dating method was not even mentioned as providing any such method for arriving at unequivocal dates. Thus while the C-14 and tree ring dating methods fall short of providing dependable dates, the dates derived by application of the Sothic method should be recognized as far less worthy of confidence.

III. The Beginning Date of a Sothic Period and the Identity of Sothis with Sirius Remain Uncertain

The commonly accepted date for the beginning of a Sothic period is 139-143 A.D. According to Meyer's theory, this means that the star Sothis (Sirius), rose coincident with the sun on the Egyptian New Year's Day of this year. This date rests on the statement of Censorinus, a Roman historian who states that a Sothic period began just one hundred years before the time of his writing. Since the B.C.-A.D. method of expressing dates had not yet been introduced, Censorinus gave the date of his writing in terms of various periods of elapsed time from earlier historical events or eras. These data are summarized below, together with the accepted dates for the incidents and the calculated date for the writing by Censorinus in each case.[15]

Some of the data given by Censorinus are not exact, since they are based on eras rather than on specific dates. If we interpret each as meaning the beginning of the era mentioned, then the data are not in agreement. It would seem obvious that if these data are to be used to determine the date at which Censorinus wrote, such use must be on the basis of selection from conflicting figures. If we grant the current view that the most probable date is approximately 240 A.D. for Censorinus, then Sothic periods began in 140 A.D., 1320 B.C., 2780 B.C., and 4240 B.C., the latter being the one which Meyer considered as represetnting the introduction of the Sothic calendar in Egypt.

The question here is perhaps not so much in terms of the exact date for Censorinus' writing as it is of the reliability of his record in the first place. The writings of antiquity contain numerous such statements and calculations, many of which must be regarded as erroneous opinions or conclusions based on inadequate data. The acceptance of this particular one, while rejecting so many of the others, requires substantiation in the form of directing us to a consistent and rational chronology of Egypt. The simple observation that Censorinus seems to have been confused in the matter

TABLE I

Censorinus' Data on the Beginning of a Sothic Period

Censorinus dates himself	Accepted date	Calculated date for Censorinus
1040 years from the Olympiad era	776 B.C.	264 A.D.
896 years from the founding of Rome	753 B.C.	143 A.D.
283 years from Parilibus		
986 years from Nabonassar's era	746 B.C.	240 A.D.
562 years from Philippi	357 B.C.	205 A.D.
265 years from Agustus	28 B.C.	237 A.D.

of the elapsed time from events he himself selected, suggests that his calculations are hardly to be considered as fully reliable.

The statement of Censorinus is commonly regarded as corroborated by the statement of Theon, an ancient astronomer of Alexander, who said that 1605 years had elapsed between the era of king Menophres and the era of Diocletian.[16] The era of Diocletian is rather firmly fixed as beginning in 284 A.D. This provides the date 1321 for Menophres, which date coincides satisfactorily with the date 1320 for the beginning of a Sothic period as calculated from the interpretation of Censorinus, which places his writing in 240 A.D. and the beginning of a Sothic period in 140 A.D. As one becomes aware of the degree of confusion which existed among the ancient writers relative to their own past, it would seem almost certain that Theon did not possess information which would permit him to place the date 1320 B.C. in the reign of any particular king with certainty. We have here then only a situation where two statements, each uncertain in its interpretation and in its validity, provide a questionable corroboration of each other.

It would seem strange, if astronomers are able to calculate backward in time and date eclipses centuries before Christ, that they would not be able to calculate back and determine whether or not the star, Sirius, was on the horizon at sunrise in Egypt on the Egyptian New Year's Day in the year 140 A.D. Actually, this calculation *has been made*, but one sees these data quoted with apparent reticence. The calculation was made by the astronomer Poole over one hundred years ago and was corroborated for correctness by the Astronomer Royal of London.[17] The calculations show that Sirius was *not* on the horizon coincident with the rising sun on this day. It was 1 hour and 16 minutes above the horizon at Thebes and slightly less than this at Memphis. We are thus faced with a curious anomaly. What shall we conclude? Are we to presume that the astronomers did not know how to make these calculations? Shall we conclude that Censorinus did not know that of which he spoke so glibly, or that his calculations were in error or possibly based on the same erroneous data used by Theon? Or is it possible that the statement of Theon is being mis-interpreted? Is it possible that it was not Sirius which is the star to be identified as Sothis? Or shall we conclude that the beginning of the Sothic period was marked by a position of Siruis which was 1 hour and 16 minutes above the horizon at sunrise? Is it possible that historians have misdated Censorinus? Or is there a possibility that Censorinus is quite correct in his dating, but that historians are mistaken about the significance of this period and in the manner in which it was used by the ancients?

The obvious conclusion is that there is something radically wrong with the reasoning and the calculations which have led to the placement of the Sothic cycle beginning in 140 A.D. This point alone may be regarded as sufficient basis for a disagreement among the authorities as to the date to be assigned to the beginning of this period and for the difference of opinion as to the reliance which should be placed on the use of this period for dating purposes. The historian Budge wrote in a most skeptical manner on this point:[18]

> . . . It must be remembered that, as said above, very little reliance is to be placed on any calculations of this kind in attempting to formulate an exact chronology, especially as authorities, both ancient and modern, are not agreed as to the exact date in the second century of our era when the Sothic period ended on which they based their calculations.

Actually the extent of the disagreement in the matter of the date for the beginning of a Sothic period is not limited to an exact fixing of this date in the second century of our era. The astronomer Lockyer fixed the date for the beginning of the cycle in the year 269 B.C., some 409 years earlier than that deduced by historians from Censorinus. Lockyer built up a chronology of the XVIIIth and other dynasties with dates set some 400 years earlier than the ones now so familiar for these dynasties based on Censorinus. MacNaughton set up a chronology based on the supposition that Sothis was not Sirius, but Spica, as a way around the difficulty.[19]

The question might be raised as to what happens if one of the alternate dates is taken for Censorinus and the beginning of the Sothic period is adjusted to this date. The answer is simple but disastrous. For if we do not take the statement of Censorinus as is traditionally done, then the statement of Theon does not corroborate Censorinus, and we have a shaky basis indeed for the entire concept of Sothic dating. The same holds true if we try to adjust this date to that when Sirius was actually on the horizon at sunrise on the Egyptian New Year's Day. There would seem to be little by way of alternative. We must either accept this traditional interpretation of Censorinus in spite of the anomalies involved or admit that some gross errors have been made in the presumed fixation of the dates for the XIIth and XVIIIth Egyptian Dynasties.

IV. Calculations Based on the Sothic Theory Are Invalid

Since Meyer first outlined his theories which form the bases of astronomical dating by the Sothic method, astronomers have had occasion to scrutinize the reasoning leading to Meyer's conclusions and have not been highly impressed. The Sothic theory as proposed by Meyer presumes that the Egyptians had determined by observation the length of the Sothic period and had used it subsequently as a long range calendar. This conclusion now seems to be quite out of the question. The trouble lies in part in the fact that the true solar year is not exactly 365 ¼ days, but is some 12 minutes short of this. A simple calculation, using the correct year length, shows that the true Sothic period is not 1460 years in length but 1507 years long.[20] The astronomers point out that during this time, the sun itself will move among the stars, and this motion is in a direction such as to partly offset the discrepancy between 1460 and 1507 years. The remaining discrepancy may be considered as sufficiently small so that the Egyptains would not detect the difference in a single Sothic period since four solar years are required for the vague year to deviate by a single day. However, the difference would certainly be apparent on the second Sothic rising and would represent an embarrassing amount of error by the third one. Since it had been assumed that the whole concept was adopted by the Egyptians as a result of observations,[21] it becomes apparent that any calendar thus set up in 4240 B.C. would be obsolete by 1322 B.C., two Sothic periods later. Since we have no reference from antiquity giving the beginning of any period prior to 1322 (assuming that Theon is referring to such), we are confronted with a presumed calendar already obsolete at the time of the first suggestion of such a beginning. It is thus quite out of the question that the Sothic period was used in the way presumed by Meyer, and his supposed date for the introduction of a calendar based on the Sothic cycle remains hanging in mid-air without a shadow of foundation.

V. The Egypitan Calendar Has Not Been Fixed Throughout the Period During Which Sothic Dating Methods Are Employed

The utilization of Sothic data for historical dating must presume that there was no change in the calendar of Egypt during the period to which the method is applied. Even after the disposition of Meyer's theory relative to the introduction of a Sothic calendar in 4240 B.C., the use of the method must still presume that no alterations in the calendar occurred between the XIIth Dynasty and the time of Censorinus which involved the length of the calendar year or the position of the months in the year. A single such alteration in this interim would invalidate all calculations and conclusions from this dating method for periods prior to such change. Actually there are a number of evidences that indicate changes in the Egyptian calendar after the time of the XIIth Dynasty.

A note appended to the name of King Aseth, one of the late Hyksos kings, whose name appears in the Sothis king list, reads:[22]

> This king added the 5 intercalary days to the year: in his reign, they say, the Egyptian year became a year of 365 days, being previously reckoned as 360 days only.

Another version of Manetho credits this same calendar alteration to the Hyksos king, Saites, at an earlier date.[23] These two records are not necessarily contradictory, since the two kings may have introduced the change in different parts of Egypt in the two cases. The question of the reliability of the note is pertinent. As previously noted, these inserted notes may represent opinions or calculations based on inadequte evidence, just as may be supposed for the calculation of Censorinus. The question of the reliability of this note must be decided on its own merits.

It has been suggested that the note has no significance, since it is otherwise known that the 365 day year was in use back as far as the Vth Dynasty. But this is no evidence against the authenticity or reliability of the note, for the calendar could have been changed from 365 days to 360 days at the time the Hyksos took over Egypt and then returned to the 365 day year at the time of Aseth. Certainly it is not illogical to suppose that the Hyksos brought their own calendar with them when they took over the control of Egypt. Even if this 360 day calendar had a very short life, this would be sufficient to completely ruin the validity of any calculations based on a presumed fixed calendar. While the point in question may not be capable of proof or disproof at this time, the note must be considered as casting doubt on the validity of any chronology which is based on the assumption of a fixed calendar. In view of the anomalous chronology which has resulted from the application of the Sothic theory, it would seem that the simplest explanation lies in the probability of error in this assumption of an unaltered calendar in Egypt through the period from 2000 B.C. to 140 A.D.

There is also considerable evidence to indicate that the first month of the Egyptian calendar did not remain unaltered during this period. By the year 721 B.C., and probably as early as 851 B.C., the month Thoth was the first month of the Egyptian calendar.[24] From inscriptions dealing with New Year ceremonies of an earlier era, Brugsch deduced that the month Hathor was the first month of the year at this earlier period.[25] The Ebers papyrus definitely gives the month Menkhet as the first month of the year.[26] In the XXth Dynasty, Hathor is the 4th month and Mesorii is the first.[27]

The ease with which the calendar could be altered is indicated by the fact that both Amenhotep III and Rameses II altered the sequence of the so-called Sed Festivals. These rulers were dictators, and there is no reason to presume that if one of them decided to make New Year's Day coincide with his birthday, or for some other insignificant reason, elected to alter the calendar, he might not do so to meet his whims. In anticipation of the Julian calendar adopted many years later, Ptolemy III introduced a true solar calendar of 365 ¼ days (probably in the year 235 B.C.). While it is not possible to relate all these various calendars to each other or to the present calendar, it would seem futile to hope to set up a valid chronology of Egypt based on the assumption that the calendar was not altered during the period from the XIIth Dynasty to the 3rd century A.D.[28] With the numerous inconsistencies and anachronisms in the chronology to which we have been led, it would seem that some one should have guessed that the difficulty lies in the extreme improbability of this premise on which the Sothic dating method rests.

VI. Ancient Inscriptions Used to Support the Sothic Theory are Vague

There are perhaps five principal ancient records which have been used in attempts to fix certain dates or events or eras in the Sothic period. Besides these, there are perhaps this many more which have an equal right to such consideration but which are commonly disregarded because they do not fit satisfactorily into the scheme which has resulted from the acceptance of the others. Not a single one of these references can be regarded as providing unequivocal dates.

The first example to be noted is the statement previously referred to from Theon, pointing to the year 1320 as the date for the era of Menophres and presumed to indicate that a Sothic period began in this year. As noted above, the use of this statement depends for confirmation on the selection of the date 240 A.D. chosen from several possible dates derivable from the data provided by Censorinus. There is considerable doubt that the statement of Theon can be depended upon as factual.[29] Disconcerting also is the fact that no king of Egypt is elsewhere known by the name Menophres, and hence his identity remains uncertain. If we follow the recognized rules for transliterating Greek names back to Egyptian, we arrive at the Egyptian name Mennefer-re. There are two kings in Egypt who had names sufficiently close to this to merit such tentative identification.

The first is a name transliterated as Menoffirre, belonging to a Hyksos king. But the Hyksos era is far out of line by the traditional chronology to allow placement of this king in the year 1320 B.C., the last of the Hyksos kings having ended his rule by 1580 B.C. Second vote should go to Menoffire Ai of the XIIIth Dynasty, but this king is even farther out of line with the year 1320 and hence likewise cannot be seriously considered. We might give a third vote to Merneptah of the XIXth Dynasty, though this name is hardly the equivalent of Menophres. He falls closer to the desired date, but is still some 70 years out of line.

Petrie suggested an identity to Rameses I, since he carried an alternate name of Men-peh-re, a name which again is hardly the counterpart of Menophres, but which has a resemblance. Petrie's suggestion has been generally accepted, not because of any convincing evidence, but rather because Rameses I falls within the era for which it has seemed logically possible to synchronize Egyptian history with later synchronims retained. Certainly nothing but the demand of the theory would give such credence to this proposed identity. If the theory proves anything at all, it proves that the year 1322 B.C. should fall during the period of Hyksos domination.

Petrie attempted to date the reign of Mer-en-re, a king of the VIth Dynasty, by the Sothic method, from an inscription by one of his officials named Una.[30] Una tells us in his inscription that he had been sent by the king to the quarry at Het-nub to secure large stones to be used in providing altars for religious offerings. After securing the stones, he floated them down the river on a barge to Memphis, arriving in the month Epiphi when, according to the inscription, there was no water over the sandbars. In spite of this difficulty, he succeeded in bringing the barge to shore and unloading his stone. Petrie concluded from this situation that the end of flood season in that era occurred in the month Epiphi. On the basis of the calculated shift of the end of the flood season from its normal position in the seasons, it was calculated that king Mer-en-re reigned about 3350 B.C. (or one Sothic period earlier by the long chronology), with an allowable error of perhaps a hundred years in either direction.

Budge recognized the insecure basis on which Petrie's calculation rested. He comments:[31]

> What Una narrates may show that the month of Epiphi was considerably out of place in the year when he went to Het-nub, but the possibility of deducing any date for the reigning king from this circumstance is too remote to be seriously entertained for a moment.

The skepticism of Budge on Petrie's conclusion has been fully born out by subsequent developments in the field of Egyptian chronology. In the course of the last several decades, there has been an increasing tendency to accept the conclusion of Scharff that Mena, the first king of Egypt, must be moved to a date in the era of c. 2800 B.C. This date is some 400 years later than the latest date deduced for Mer-en-re of Dynasty VI, a situation which is of course impossible. One might argue that Mer-en-re of Dynasty VI should then be moved one full Sothic Period later than his placement by the short chronology and date him in the era of 1900 B.C. But this is not permissable, since this period is already assigned to the XIIth Dynasty by the same method of Sothic reckoning. We have heard no suggestion, other than our own, that the VIth Dynasty should be made contemporary with the XIIth. Or it might be argued that Una's arrival at Memphis was at the beginning of the flood season, before the waters had risen to cover the sandbars. This hardly makes sense either, for then Una's trip up the river with his barge must be placed during the dry season, and this in turn puts his quarrying work in the hot summer season, when quarrying was deliberately avoided because of the difficulties involved. The obvious conclusion would be that this inscription, like all others used to the same end, provides no basis whatever for dating the reign of Mer-en-re.

The Egyptologist, Ebers, discovered a papyrus dated on the reverse side as of the 9th day of the 11th month in the 9th year of king Zeserkare.[32] Ebers identified Zeserkare as Amenhotep I of the XVIIIth Dynasty, a conclusion which was hotly contested for a period prior to its general acceptance, since other kings were also known by this same name. The papyrus contains data in the form of a calendar of months, which has been used as the basis of Sothic reckoning for the dating of Amenhotep I. The data, however, raised difficulties, since the calendar specifically refers to the month of Menkhet as the first month of the year, rather than Thoth, which was certainly the first month a few centuries later. The explanations offered to account for this discrepancy have, to say the least, not been very credible, and a recognition of a need for a simpler explanation has been voiced.[33] By assuming that the calendar meant Thoth when it read Menkhet, a date was calculated for Amenhotep I in the 16th century as demanded by the traditional chronology.

An inscription presumed to have been produced under Thutmose III states that a Sothic rising took place on the 28th day of the third month of the season of innundation (i.e., the 11th month of the year).[34] However, the inscription does not state the name of the king nor the year of his reign. It is ascribed to Thutmose III on the basis of the appearance of this name on another fragment *presumed* to be from the same inscription, but found at some distance from it. The astronomer Torr commented on the worthlessness of this inscription to prove anything, since the inscription may have been produced by any one of the successors of Thutmose III.

Perhaps the most important inscription on which Meyer based his calculations is presented by what are known as the Kahoun Papyrii. This series of papyrii inscriptions were discovered by Borchardt in 1899, one fragment of which contains a reference to a Sothic rising which stands as the key record for Meyer's Sothic theory. The record is addressed to a priest by the name of Pepihotep and is dated in the 7th year of the reign of Sesostris III of Dynasty XII. That part of the record of primary interest here reads:[35]

> "You ought to know that the rising of Sothis takes place on the 16th of the 8th month. Announce it to the priests of the town of Sekem-Usertesen and of Anubis on the mountain and of Suchos. . . and have this letter filed in the temple record."

Assuming that the "rising of Sothis" of this inscription refers to the coincident rising of Sothis with the sun (although calculations do not support this concept for the marking of the beginning of a Sothic period in the time of Censorinus), and assuming that Sothis is the star now known as Sirius (which assumption is not corroborated by astronomical calculations for the Sothic beginning in 140

A.D.), and assuming that the calendar involved in this inscription was for a vague year of 365 days which was not altered between this time and the time of Censorinus (which assumption would seem certainly to be in error), and assuming that the 8th month of this calendar was the same as the 8th month of the calendar at the time of Censorius, (which assumption must certainly be in error), it is calculated that the 7th year of Sesostris III fell in the era 1876-1872 B.C. Since the internal chronology of the XIIth Dynasty has been established with some degree of certainty, the era for the dynasty is thus regarded as fixed in the era approximated by the dates 2000-1787 B.C. These dates, as an approximation, are rather universally accepted among historians as marking the limits of Dynasty XII.

The reliability of this conclusion is no greater than that of the assumptions on which it is based. The least that can be said is that there are no less than three other interpretations for this inscription which are reasonable. The first of these assumes that, since the calendar of Egypt was not fixed from the time of the XIIth Dynasty, all possibility of connecting the calendar of this inscription with that on which Censorinus based his statement is lost, and even if the Sothic period was utilized by the Egyptians in the manner presumed, there remains no basis for dating events by this method. The second explanation presumes that the Egyptians, even at this early date used a true solar calendar of 365 ¼ days.[36] By this thesis, the expression "You ought to know that the rising of Sothis takes place," does not mean that the priest should know this because of recorded observations over the past period of 1460 years, but rather that he should have known this because it occurred at this same time every year. The third interpretation would presume that the star, Sothis, is not Sirius, since this star was not on the horizon at sunrise in Egypt on New Year's Day in 140 A.D. This theory was adopted by MacNaughton, who built up a complicated astronomical basis for his chronology based on the identification of Sothis as Spica.[37]

The author of this work holds to the view that, whatever the interpretation of Sothic data which may eventually be substantiated as correct, there is, nevertheless, very good reason for believing that the Egyptians, as early as the early IVth Dynasty, used a true solar calendar of 365 ¼ days which could be regarded as fixed in the same sense that our present calendar is fixed, i.e., it was periodically corrected to take care of the accumulated discrepancies. Even if a second migrating calendar was simultaneously in use for certain purposes, the references are too vague to permit the use of such as a basis for establishing a chronology. This deduction should be apparent, since none of the premises on which this theory of dating rests can be regarded as having been established. The inescapable evidence that the Egyptians of the IVth Dynasty had a knowledge of mathematics and astronomy sufficient to calculate the exact length of the year is presented in a subsequent section of this chapter.[38]

When one sees the significance of these alternate possibilities for interpreting the inscription of the Kahoun papyrii, there is no particular difficulty in realizing that there were ample grounds for the rejection of the theory of Sothic dating by Brugsch and other astute authorities, who simply could not see in it any solid basis for providing a system of dating, and more specifically, as far back as the XIIth Dynasty. It would seem that historians in general who understand the full import of the objections raised to the validity of this theory must admit that it is not possible to date events by this method as far back as the time of Sesostris III. There are some, however, who believe that when data are used in conjunction with data relative to a second cycle, such as that of the moon, then it is possible to date events back this far with a degree of exactness and certainty. Hence the assumptions on which such a belief rests require critical scrutiny.

The principles at point are very simple. If an event can be pinned down in two independent cycles, the chronological conclusions rest on a more secure foundation than when a single cycle is used. However, it must be apparent that the use of a very short cycle, such as that of the moon, to confirm dates derived by use of a much longer cycle, such as the Sothic cycle, has some very large inherent weaknesses. The cycle of the moon will repeat itself so many times in the course of one Sothic cycle that any given lunar data can be made to fit satisfactorily into the Sothic period at a considerable number of points. Hence, unless the date for the incident involved is known approximately and with certainty from independent data, it is very possible that any proposed confirmation may be only wishful thinking. The most that could be expected of this method is the determination of the most logical date within a relatively narrow era which provides the best harmony between lunar and Sothic data. If this narrow era has not been established with certainty, the conclusions reached are quite worthless as confirmation of a chronology.

VII. Sothic Dating Has Led to an Incredible Chronology

Not the least of the reasons for rejecting the Sothic method of dating is that it has led historians to adopt an incredible chronology of Egypt. If we accept the Sothic datings for the XVIIIth Dynasty as demanded by the identification of Menophres with Rameses I and accept the most questionable datings based on the Ebers papyrus, then the beginning of the XVIIIth Dynasty is fixed at a date which cannot be far removed from 1580 B.C.[39] By the same token, if we accept the dating of Sesostris III as calculated from Sothic data found in the Kahoun papyrii, the end of the XIIth Dynasty is fixed at a date not far removed from 1788 B.C.[40] This leaves a period which cannot be in any considerable excess of 210 years from the end of Dynasty XII to the beginning of Dynasty XVIII. Into this brief period must be squeezed all the reigns of the kings of the XIIIth Dynasty prior to the Hyksos invasion (probably some 26 or more in number), followed by the total period of Hyksos domination and a brief period for the XVIIth Dynasty.

At the time of the proposal of the fixation of the chronologies of the XIIth Dynasties, there was strenuous objection to the resulting structure. Petrie pointed out that on the basis of the data then available, the only rational conclusion would involve the insertion of an extra, full Sothic period of 1460 years into this interim. The comments of Petrie on this question are of sufficient importance to reproduce them here in part:[41]

> . . . The question in debate is in which cycle the XIIth Dynasty occurred; does it end at 1786 B.C. or 3246 B.C.? Or, as it is agreed the XVIIIth dynasty began in 1580, were there 206 or 1666 years between the XIIth and XVIIIth dynasties? The advocates of the short period claim that there are not enough monuments known to fill more than two centuries. Yet we have remains of at least seventeen kings of the XIIIth dynasty, and every year adds to their number, which on an av-

> erage of 7 years each is 120 years. The Hyksos age is now fairly defined, and requires us to recognize at least ten important reigns, besides the probability of a large number more, and 150 years would be a low estimate for what is already well known. And at least 10 years must be allowed in the XVIIth dynasty. Thus 280 years is covered by reigns which are evident, while we ignore the probability that we only know yet the minor part of the rulers in this very dark and confused period. To compress this into two centuries seems impossible. The advocates of the longer period consider that the evidence of changes in the art, the language, and the burial customs show that much more than two centuries had passed, and that this fully balances the supposed scantiness of monuments as historical material.

Subsequent developments have shown that it is equally impossible to insert an extra Sothic period between Dynasties XII and XVIII as proposed by Petrie, since it is now apparent that the date of Mena must be moved to a date later than that which would result for the end of Dynasty XII. However, the increasing amount of data from this era, between Dynasties XII and XVIII, make it necessary to leave room, not only for the 17 kings known when Petrie wrote, but for not less than 26 such kings in Dynasty XIII prior to the Hyksos invasion.[42]

As a result of the disagreement among historians on this point, two theories were held by various authorities known as the long and the short chronologies for the Hyksos era. Petrie was the principal proponent of the long chronology. Many historians were not primarily chronology conscious, and the remainder of those who were (Breasted, Meyer, and Weill) leaned toward the short chronology. With the death of Petrie, and the loss of the principal supporter of the long chronology, the short chronology has become generally accepted along with the chronology of later Egypt which results from this 208 year squeeze. A summary of the diverse opinions held by various authorities at the time is provided by MacNaughton. He writes:[43]

> Breasted, accepting Meyer's arguments, drew up an elaborate chronology based on the minimum lengths of reign of the kings and Dynasties as shown from the monuments. On reading his chronology one is left with the impression that he regards a minimum date as likely to be the correct probability. . . . It is therefore strange that so able a scholar as Breasted should have stumbled into the same type of pitfall. Nevertheless his chronological discussions are very valuable provided it is kept in mind that what he really is demonstrating are the minimal dates, not the probable dates.

> Petrie, with a knowledge of the practical difficulties in the way of Meyer's theory, proposed an extra Sothic cycle between the Twelfth and Eighteenth Dynasties, but this, though ingenious, is untenable with Sirius as Sothis. . . . What Petrie emphasized, however, was the complete incompatibility of Meyer's theory with the archaeological evidence and the evidence of the King Lists.
>
> But as the outstanding Egyptologists with a chronological bent . . . were three in favour of a form of "short" chronology and one in favour of a "long" chronology, it is perhaps not surprising that those who had not time to study the chronological problem for themselves gave their vote for the "short" chronology.
>
> Budge, however, refused to accept the "short" chronology and later, Hall thought he would effect a compromise by choosing a date for the Twelfth Dynasty intermediate between that of Meyer and of Petrie. He regarded the changes in art between the Twelfth and Eighteenth Dynasties as unlikely to have occupied so short an interval as 200 years or so long an interval as 1600-1700, and he entirely abandoned the Sothiac cycle as a clue to the period elapsed.
>
> Petrie has now also abandoned the Sothiac cycle and substituted a theory that the dates of the Twelfth Dynasty were quoted in terms of a seasonal calendar. On cultural grounds, more particularly basing his conclusions on the variations in the types of Hyksos scarabs recently discovered by him, he now estimates the interval at about 800 years.
>
> Baikie, who has evidently made a special study of the artistic side of Egyptian life, thinks that arguments based on estimates of length of time for a change to have taken place in the arts of a nation are based on a slender foundation and that on cultural grounds a "long" chronology is just as likely to be right as a "short" chronology.
>
> Weigall favours a short chronology but is evidently conscious that to a reader new to the subject the crushing of the Thirteenth, Fourteenth, Fifteenth, Sixteenth, and Seventeenth Dynasties into two or three hundred years will appear somewhat ridiculous. He therefore excuses himself by explaining that "of course the most important argument in favour of the arrangement is that the Thirteenth, Fourteenth, and Fifteenth Dynasties have got to be fitted into a period between the astronomically fixed date of the fall of the Twelfth Dynasty and the rise of the Seventeenth." As the Twelfth Dynasty is not astronomically fixed where he thinks it is the necessity for the squeezing of the evidence disappears.
>
> My own view [MacNaughton's] based principally on astronomical evidence, calendrical evidence, the evidence of the King Lists, and synchronims with Babylonia, is that the interval from the end of the Twelfth Dynasty to the beginning of the Eighteenth Dynasty was somewhat less than 1500 years.

It should be noted that the reason why Breasted set up his chronology in terms of minimal reigns of the kings of Dynasties XVIII and XIX was because he was forced to do so to squeeze these dynasties into the period in such a fashion as to retain certain synchronims which had long been accepted. While MacNaughton is unquestionably correct in his criticism of Breasted in this interpretation of the monumental data, it must be recognized that there is little by way of alternative if the limitations imposed by the Sothic method are accepted. The important thing to keep in mind is that the acceptance of either the long or the short chronology based on the fixation of dates by the Sothic dating method leads us to an incredible structure. Petrie's long chronology provides an untenably long period between the two dynasties, as he himself must have eventually recognized. The short chronology forces us to squeeze this period into an incredibly short space.

With the acceptance of the short chronology by historians in general, the problem has become one of dividing this 208 year period between Dynasties XIII, XVII, and the Hyksos period in some sort of a credible manner. The tendency seems to be to allow about 10 years for Dynasty XVII and divide the remaining time between the kings of Dynasty XIII and the Hyksos period. Neither of these allottments is credible. Even granting but 26 kings of Dynasty XIII before the Hyksos conquest only provides an average of four years reign for each. Elsewhere, such a condition would be interpreted unequivocally as a period of chaos approaching anarchy with a rapid turn-over of rulers. Yet the archaeological evidence indicates that no such conditions prevailed during this period.[44] Some of these rulers must have had very normal periods of reign with time to erect imposing monuments with no indication of haste.

Nor is it any more credibly possible to squeeze the Hyksos period into a 100 year period now than it was when Petrie pointed out the impossible nature of such an arrangement. Manetho allows 250 (or 284) years for Dynasty XV alone, giving the length of reign for each of its kings. Following this was a less well defined period of Dynasty XVI which may well have involved a divided reign between two or several kings at one time. To squeeze these two dynasties into a period of 100 years has no resemblance to the interpretation of Manetho's dynasties otherwise. Miss Kenyon allowed 150 years for the Hyksos.[45] This is still insufficient for the era and reduces the period for Dynasty XIII to a still more incredible value.

Were it not for the pressure of the presumed fixation of dates by the Sothic dating method, no historian would presume such a short period for this era on the basis of data otherwise available.

VIII. Not All Data Relative to the Sothic Cycle Fit into Meyer's Theory

If the interpretations of Meyer are correct, then all of the data which may be brought to bear on this problem should fit satisfactorily into the Sothic theory. This is far from the case. As of the present moment, there are far more data pertinent to the question which do not fit into the theory than there are which do apparently fit. The record of Theon as related to Menophres and his identification to Rameses I has already been introduced. The collapse of the earlier interpretations relative to Una have also been referred to. The historian Brugsch called attention to two references to Sothic risings which were studied in detail by the astronomer Lockyer.[46] On the basis of one of these, Lockyer concluded that a Sothic period began in the year 269-270 B.C., which conclusion is at variance with the statement of Censorinus by some 409 years. In the reign of Osorkon II of Dynasty XXII, there was an unusually high Nile, which resulted in a flood of the temple of Osirus.[47] The flood is dated as occurring on Tybi 12, which in the year 876 B.C. (ascribed to Osorkon II), was "extraordinarily early" as calculated by Petrie. King Pankhi I of the XXVth Dynasty examined the fortifications near Memphis and noted that "the water came up to the road below the walls, and that ships were moored there."[48] The date would coincide with our April, at which time the Nile was at *low* level. To by-pass this anomaly, it has been supposed that some sort of a system of dams had been used to retain the water at high level during the dry season.

While Theon is commonly credited with supporting the concept that a Sothic period began in 1321 B.C. in the era of Menephres, He also leaves a clear statement to the effect that a Sothic period began in the 5th year of the reign of Augustus (B.C. 26). [48a]

> . . . Now this period of 1460 years, commenced from a certain time, terminated *in the fifth year of the reign of Augustus;* so, *from this last epoch*, the Egyptians began all over again to find themselves every year one quarter of a day in advance.

Later in his discourse, Theon again reiterated this concept:

> ". . . we have said that *the return of the coincidence of the year of Alexandria with that of Egypt occurred five years after the beginning of the reign of Augustus.*"

Unless we are permitted to conclude that there was more than one way of defining the beginning of a Sothic period, it is difficult to see how these statements can be harmonized with an interpretation of Theon which places the beginning of such a period in 1321 B.C. If we allow that there is more than one way of defining what was meant by the beginning of a Sothic period, then none of these references to such can, with certainty, be used for chronological purposes, and in neither case can we resort to Theon as an authority as far as defining a date for the beginning of such a Sothic period.

IX. The Sed Festivals and Sothic Dating

Records of the celebration of the so-called Sed Festival are extant, in vague form, from the earliest historical era of Egypt. More definite references have been noted in inscriptions from the VIth and XIIth Dynasties. However, it is not until the XVIIIth Dynasty that such references become sufficiently frequent for use in chronological dating. A series of such records are available beginning with the 9th year of the reign of Amenhotep I reaching to the second year of the reign of Merneptah. Four of these records give the year of the king's reign and the calendar date on which the festival was celebrated. Others give the calendar date, but not the year of the king's reign, and still others give the year of the king's reign but not the calendar date. The available data are summarized in Table II.[49]

A variety of interpretations have been proposed on the possible significance that was attached by the Egyptian kings to his festival. Since the feast came to be known as the Thirty-year Festival, some have presumed that the occasion was the 30th year of the king's reign. The fact that Amenhotep III and Rameses II celebrated the occasion in the 30th year of their reigns gives support to this concept. Others have objected to this interpretation, since other kings celebrated the occasion earlier in the reign, and in some cases, this was done by kings who never reached the 30th year of reign. Hatshepsut observed the occasion in her

16th year and Merneptah in his second year. Tutenkamen leaves a Sed Festival record in his tomb, and it is certain that he reigned but a very few years. A variant of this concept proposes that the thirty years was counted from the time of accession as coregent or perhaps at the time of selection as the heir apparent, which may have been at birth.[50] Celebrations in the reign of Tutenkamen and in the 2nd year of Mernaptah would appear to contradict this interpretation.

A different interpretation has been presumed by Petrie and accepted by other historians.[51] By this thesis, the celebration of the feast was related to Sothic risings and occurred with each succeeding appearance of the new moon on the same day (night) when Sothis rose coincident with the rising sun. Presuming that a vague year of 365 days was in use, this situation could be expected to occur at intervals of 27 or 30 years. If a given rising occurred on the occasion of a new moon, the Sothic rising 27 years later would occur about 1 day later than the new moon but if 30 years later, about one day earlier than new moon.[52] Hence if the periods were alternated between 27 and 30 years, the coincidence would remain approximately intact throughout the period involved.

It will be noted from the data of Table II that the celebrations in the reigns of Thutmose I, Hatshepsut, and Thutmose III were each just seven days later than the previous occurrence providing a basis for this interpretation of the significance of the Sed Festival, since the vague year deviates from the true solar year at the rate of one day in

TABLE II

Sed Festival Celebration Records of the XVIIIth and XIXth Dynasties

King	Regnal Year	Calendar Date
Amenhotep I	9th	9th of 11th month
Thutmose I	unknown	14th of 11th month
Hatshepsut	16th	21st of 11th month
Thutmose III	33rd	28th of 11th month
Amenhotep II	unknown	7th of 12th month
Amenhotep II	unknown	14th of 12th month
Amenhotep III	30th, 36th	undated
Rameses II	30th and at 3yr. intervals	undated
Seti I	unknown	undated
Merneptah	2nd	29th of 1st month

four years. While several feasts must be presumed to have occurred for which no references are extant, it would seem that the celebration in the second year of Merneptah on the 29th of the first month continues to follow the pattern observable from the earlier data, which suggest that each succeeding occasion came seven days later in the vague year at intervals which averaged 28 years. If this concept is correct, then the festival is tied to the Sothic period and may be regarded as providing additional data in support of the Sothic dating method.

There are, however, a number of weaknesses in this interpretation which cannot be ignored. In the first place, the feast was known as the Thirty-year Festival, and such a title can be related to this interpretation only with reservations. Secondly, the festival of Thutmose I was only five days earlier than that of Amenhotep I, and that of Amenhotep II was nine days later than that of Thutmose III. These data indicate that either the feast was not celebrated on the occasion of the new moon or that the interval in the first case was only 20 years, while that in the latter was 36 years, thus providing two exceptions to the interpretation in the sequence of five celebrations. Thirdly, it is apparent from the extant inscriptions of Amenhotep III and Rameses II that these rulers celebrated the occasion at intervals of 3 or 6 years, and such celebrations could not possibly have been at a coincidence of a new moon with a Sothic rising. It is also necessary to assume that Sed Festivals were celebrated in the reigns of Amenhotep IV, Seti I, Rameses I, and early in the reign of Rameses II in order to provide enough 28 year periods to span the period involved. For these occasions, there is no monumental support. Finally, authorities are not agreed on the chronology through this era, and hence the dating of the second year of Merneptah cannot be stated with certainty to be in agreement with the proposed extrapolation of this series to include his celebration.

In spite of these many weaknesses, Petrie was of the opinion that these data constituted virtual proof of the correctness of the accepted scheme of Egyptian chronology. He wrote:[55]

> . . . But in any case, the general agreement of these dates deduced from the festivals with those of the lengths of the reigns, gives security to the chronology; it shows that in [the] future we shall probably only deal with rectifications of a few years. . . .

It thus becomes of importance to re-examine these data in the light of the revised chronology of Egypt. In the setting up of this revised scheme, we have not only violated irreparably the traditional views on the interpretation of Sothic data, but we have also condensed the period involved in this series of festivals by some 65 years, which has yielded a period too short for the required number of occasions at 28 year intervals.[54] The interpretation of Petrie is thus out of the question by the revised scheme, except perhaps as some rather awkward assumptions are invoked.

A careful examination of the available data leads us to believe that the Sed Festival was originally designed to be exactly what should be logically inferred from the connotation as a Thirty-year Festival. This thirty years, however, was not measured as beginning with accession to either coregency of reign, but only by age. The king celebrated the occasion if, at the age of thirty, he was a ruling monarch, and celebrated it at 30 year intervals thereafter so long as he reigned. Thus a king who began to reign before he was thirty and reigned until he was sixty or more would celebrate two Sed Festivals. Kings who died short of the age of thirty would thus not have such a celebration, and kings who began their reign after the age of thirty and died before the age of sixty would likewise have no occasion for a celebration. This original significance was, however, violated by Amenhotep III and by Rameses II, who celebrated the feast at intervals of six or three years. Amenhotep II also celebrated the feast on two occasions for which the regnal years are not stated. There is a possibility that it was Amenhotep II who first deviated from the traditional custom, since he reigned only a few months over thirty years.

That it was age which stood as the original basis for the celebration of the Sed Festival is strongly suggested in some of the inscriptions. On the occasion of the festival in the 33rd year of Thutmose III, a million Sothic cycles (long life) were wished for the king.[55] On the occasion in the reign of Seti I, it is said of the king:[56]

> "Thou art renewed and thou beginnest again, thou becomest young like the infant moon god; thou growest up again (like) him from season to season like Nun at the beginning of his time: Thou (renewest) thy births by repeating the Sed-feast."

This inscription indicates that the feast was held on the occasion of the new moon, which was taken as the symbol of a renewed birth, thus the significance of the alternate connotation as the Thirty-year feast is at once apparent, since the moon had such a re-birth approximately every thirty days. This explains the progression of the feast if we simply assume that the new moon occasion was celebrated at a specific season of the year, and there is thus no genuine reason for associating the occasion with the rising of Sothis. This interpretation does not demand any fixed number of occasions during the time interval involved, since the celebrations were not at any fixed interval of time. If this interpretation is applied to the revised chronology of Egypt for this period as represented in a previous volume by Figures 9 to 11, recognizing the deviation from the traditional custom by Amenhotep II, Amenhotep III, and Rameses II, one may arrive at the data as provided in Table III. The chronological positions for the various datable celebrations in the critical era of the early XVIIIth Dynasty are there indicated.

Starting with the most solidly dated feast, i.e., that of the 33rd year of Thutmose III, it is deduced that Thutmose III was 60 years old at this time.[57] As proposed by Petrie, the earlier celebration, in his third year, was probably coincident with that in the 16th year of Hatshepsut.[58] Thutmose III was thus 49 years old when he became first ruler and 27 years of age at the accession of Hatshepsut as first ruler. Hatshepsut in turn was 44 years old at the time of her accession as first ruler and thus 60 years old at the time of her celebration of the festival in her 16th year.

These data help us to understand the confused situation which was precipitated at this time and which led some historians to erroneously presume that the appointment of Hatshepsut as coregent led to an extended "feud among the Thutmosides."[60] A closer scrutiny of the inscriptions led Edgerton to reject this concept.[61] At the time of appointment of Hatshepsut as coregent, her father (Thutmose I) was already an old man of about 65 years.[62] Since neither Ahmose or Amenhotep I utilized a coregent, we may suppose that the initiation of this practice by Thutmose I was a move of necessity, due to his failing health at an advanced age. At this time, his oldest living son, Thutmose II was about 44 years of age. Hence the decision facing Thutmose I was between the appointment of his sickly son[63] as coregent or his more promising but younger daughter. Whether in wisdom or otherwise, it seems to have been his decision to give the appointment to his daughter, whom he then married to his eldest son, thus passing the appointment to his son under the guidance of his wife sister.[64]

This move may have been in anticipation that his sickly son would not live long. This turned out to be the case when Thutmose II died about two years before his father.[65] This may be the explanation of the concept of a return of Thutmose to the throne briefly before his death. At the time Thutmose I died, Thutmose III as son of Thutmose II,[66] was 27 years old and old enough to take over the responsibilities of the government. However, with both Thutmose I and Thutmose II now dead, Hatshepsut had no inclintion to surrender the throne to her nephew, who then had no choice but to accept the offer of coregency and silently smart under his restricted ambitions for a full 21 years until the death of Hatshepsut at 67. By this time, Thutmose III was getting highly impatient and lost no time in marshalling an army and beginning the extended program of conquest, which included the sacking of Solomon's temple and the submission of Judah and Israel.

Like Thutmose I, Thutmose III did not appoint a coregent until old age made the move imperative. Not until six years before his death at 81 did he appoint his oldest living son ((Amenhotep II) as his coregent. Amenhotep II celebrated the Sed Festival twice during his reign. Since he reigned slightly less than 31 years by a few months, we may presume that he was just under 30 at the time of succession and died just after his 60th birthday. However, such an interpretation requires improbable assumptions in the genealogy, and it becomes more probable that Amenhotep II celebrated the first occasion at the age of 60, after a reign of about 10 years, and the second at the occasion of his 30th year of reign at about the age of 80, thus introducing a deviation in the original plan. These figures leave room for regarding the births of Amenhotep II, Thutmose IV, and Amenhotep III, when the father was about 22 years old, as an average.[67]

Thutmose IV was then about 35 at accession and 45 at death and thus did not have a Sed Festival celebration, and no record of such has been found. Amenhotep III was then about 24 at accession and 61 at death. These figures are in excellent agreement with his Sed Festival celebrations in his 30th and 36th years of reign as evidenced by his inscriptions. The first of these was at the age of 54 in his 30th year of reign and the second at the age of 60, shortly before his death. The expected celebration in the 6th year of his reign at the age of 30 is without monumental support, but this is no proof that the Sed Festival was not then celebrated. These interpretations are in line with the evidences from the mummies which show that Thutmose III and Amenhotep II were old men at death, while Thutmose II was only of middle age.

At the death of Amenhotep II, Amenhotep III became first ruler and evidently had no son old enough at the time for assuming those governmental responsibilities expected of a coregent. Since Amenhotep IV reigned 17 years and was still a young man at death, we may presume that he was taken on as coregent long before maturity thus explaining, in part, why his greatest accomplishment was the introduction of a heretical religion for which he was hated by subsequent generations. No Sed Festival record is extant from this reign, and the king evidently died before 30 years of age or else was totally disinterested in the ceremonies connected with the state religion.

The next Sed record is from the tomb of Tutenkamen, suggesting that he celebrated the occasion shortly before death at the age of 30. An undated inscription from the reign of Seti I indicates that he also celebrated the festival, but the absence of a regnal year brings to an end the possibility of any chronological interpretation. Our only choice is thus to move down to the dated celebration in the 2nd year of the reign of Merneptah and calculate backwards as far as data permit. This celebration was evidently at the age of 60, and this conclusion is in agreement with the conclusion of Petrie that Merneptah was appointed as heir-apparent (but not as coregent) in the 55th year of Rameses II. Since Rameses II reigned for another 12 years, Merneptah was 46 at this time and his appointment evidently resulted from the previous death of the older sons.[68]

TABLE III

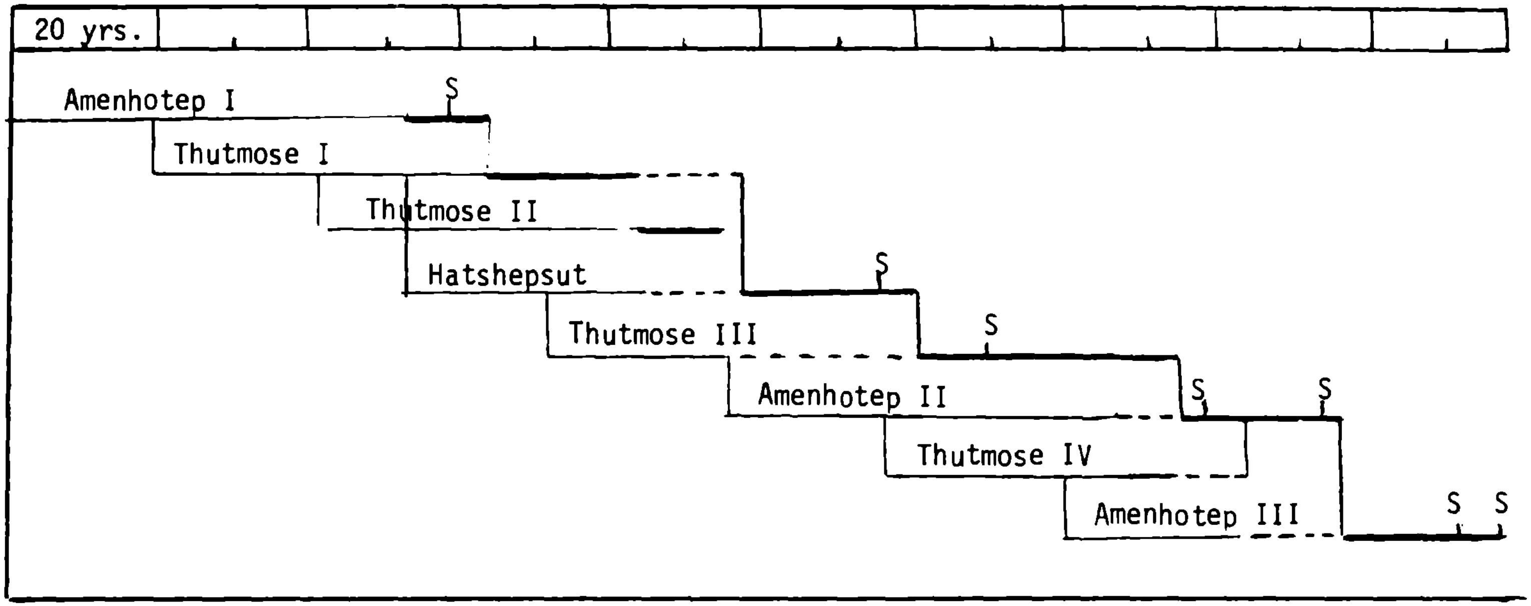
Data Derived from the Revised Interpretation of Sed Festivals*

King	Age of Father at Birth of Heir	Age at Accession	Age and Regnal Year at Sed Festival	Age at Death
Amenhotep I		51	60 in 9th year	64
Thutmose I	19	45	record undated	78
Thutmose II	22	44	no sed record	53
Hatshepsut	32	44	60 in 16th year	67
Thutmose III	29	49	60 in 33rd year	82
Amenhotep II	24	50	Sed records not dated. Assumed 60 in 10th year	80
Thutmose IV	20	35	no Sed record	45
Amenhotep III	21	25	30th year of reign; 36th year of reign at age of 60	61
Amenhotep IV	41	12	No Sed record	29
Tutenkhamen			tomb record	31
Harmhab			no Sed record	
Seti I			Sed record not dated	
Rameses II		19	30th year of reign; 60 in 41st year; other celebrations irrational	86
Merneptah	26	46	60 in 2nd year	

*Data are approximate only and are based on the revised chronology of Egypt as shown diagramatically in Figure 10 of Volume I. Dates are intended to show that the Sed Festival data are reasonable within the limits imposed by the altered chronology and in line with an interpretation of the significance of this festival which assumes that the original plan was celebration at the age of 30 if the king were reigning at this age, and every 30th year thereafter as long as he reigned.

Rameses II celebrated the feast in his 30th year, as did Amenhotep II and Amenhotep III, in deviation from the original plan, and then at intervals of three years thereafter. This somewhat irregular practice prevents the establishment of more exact data relative to the reign of Rameses II. If it is assumed that he was about 20 years old at accession, the celebration in his 41st year would then be the celebration at the age of 60, thus refining the age at accession to 19. This would suggest that either the reign of Seti I was not greatly in excess of 30 years or else that he married later in life. The apparent old age of his father, Rameses I, at death would seem to indicate that the latter was more probably the case. This would agree with his apparent interest in extended military expeditions during the early part of his reign. There would appear to be no data available which

Figure 1. Sed-Festival Celebrations in the Early XVIIIth Dynasty



Showing how the Sed-festival data can be fitted into the revised chronology based on the alternate interpretation of the significance as a celebration at 30 years of age if the king was reigning at this age and every 30 years thereafter so long as he reigned.

Total horizontal lines represent life span
Thin horizontal lines represent years to accession
Heavy horizontal lines represent sole reigns
Dotted lines represent coregencies
S represents points of Sed-festival celebration. Those not datable not shown.

cannot be satisfactorily explained on the basis of the revised interpretation of the Sed Festival which would make its original significance that of a celebration when the reigning king reached 30 years of age, and every 30 years thereafter, recognizing innovations in the original plan by Amenhotep II and Amnhotep III.

X. *The Egyptians of the IVth Dynasty Had the Know-how for Correcting Their Calendar to an Exact Solar Year*

The Sothic theory of dating has as its fundamental basis the belief that the Egyptians of early antiquity were *not* adequately versed in the mathematics of astronomy to permit a knowledgeable correction of their calendar in order to prevent the seasons from becoming displaced in the year. The current views on the chronology of Egypt are tightly bound to certain vague inscriptions which have been interpreted to indicate such a migration of the seasons. While it remains true that, to date, no inscription has been found stating explicitly that any such correction was made, this is no proof that such correction was not made. It is not scientifically feasible to use what we do not know as a support for the validity of deductions that cannot stand on their own feet otherwise.

On the other hand, evidence has long been available to indicate that the Egyptians back as far as the IVth Dynasty *did have* the know-how and the necessary information for making such adjustments in their calendar. If they had such knowledge, it is only reasonable to assume that this knowledge *was used* to make these corrections. This evidence does not preclude *per se* the possibility that such knowledge was lost during the subsequent centuries; however it is highly improbable that once the correction system was in use the mechanics of the correction would be lost. The vagueness of the evidence used to support the hypothesis of an uncorrected calendar as the sole calendar of Egypt does not warrant the use of such an hypothesis for "fixing" the chronology of ancient Egypt. The data in question are capable of an alternate interpretation that does not require recognition of such a wandering calendar.

It is first to be noted that the Egyptian seasons were named as the Season of Sowing, the Season of Harvesting, and the Season of Inundation. It is most unlikely that these names would be retained through a period of 1460 years, making it necessary to refer to the actual Season of Inundation as the Season of Sowing. More credible is the assumption that a correction system had already been devised and adopted before the seasons were given these names.

Secondly, as pointed out by Davidson,[69] the various references to sowing, harvesting, and quarrying through the era of the first twelve dynasties, which also refer to the month of the year, indicate that there is no necessity for supposing a shift of the seasons in the calendar year of months. It is true that such data can be made to fit into more than a single calendrical interpretation; hence undue weight should not be attached to such data. Nevertheless, any credible chronology should be able to show a reasonable degree of harmony with such references.

It is to be noted also that early Scripture refers to the year as composed of 12 months of 30 days each,[70] with no indication of any correction even to the extent of adding 5 intercalary days. Yet without such correction, the seasons would have migrated backward through the year at the rate of 5¼ days per year to give a cycle of only 70 years rather than 1460 years. The existence of such a situation is even more incredible than would have been the case in Egypt.

Other evidence from Scripture indicates that the calendar *must have been* corrected in spite of the absence of reference to such correction. This follows from the fact that the various feasts of the ancient Hebrews were related to both the seasons and to the calendar months. For example:[71]

> Also in the fifteenth day of the seventh month, when ye have gathered in the fruit of the land, ye shall keep a feast unto the Lord. . . .

The context indicates clearly that this was to be an annual festival; yet if the seasons had been migrating through the year, it would have required hardly a decade before the harvest would not have been in the seventh month at all. We do not know just how this correction was made in early Biblical times; we do know how it was done in post-Biblical times,[72] and the very fact that the Jews this late did correct their calendar to maintain a proper relation between feast days and the seasons reflects such a practice at least from the time of Moses.

Even more significant is the inescapable nature of the evidence now available to indicate that the Egyptians of the IVth Dynasty had a sufficient knowledge of the sciences of mathematics and astronomy to permit a determination of the length of the solar year in days and a decimal fraction of a day with an accuracy comparable to that of modern times.[73] *Furthermore, this evidence points to a year in this early era quite identical in length to the period of revolution of the earth about the sun as measured in modern times.*

This information has been available to scholars from the 1920's. These data refute unequivocally the concept that the ancient Egyptians this early did not have the know-how for correcting the calendar so that the seasons would retain their positions within the calendar year. The data under consideration were obtained by an extended and detailed examination of the Great Pyramid of Khufu, first king of the 4th Dynasty. These investigations began back in the 17th century and later attracted the interest of such scholars as Sir John Herschel, England's foremost astronomer of the early 19th century, Sir Isaac Newton, Charles Smyth, Astronomer Royal of Scotland, William Petrie (later to become Sir Flinders Petrie), and others. Unfortunately, Smyth, having a strong religious bent, made the mistake of imposing unsound theories upon what was otherwise a valuable contribution, thus bringing the entire project into disrepute among many scholars. He proposed that the measurements of the various passages in the structure had a prophetic significance covering thousands of years of history reaching into modern times. The theory was based on a belief that each inch in the passageway represented a year of prophetic history.

Some scholars, however, were not so readily dissuaded, and the investigations were continued to the point where solid conclusions could be drawn from the data. The investigations had been prompted by statements made by certain of the ancient Greeks testifying that the perimeter of the base of the pyramid was intended to measure half a minute of longitude, i.e., that 480 times the length of one side was equal to a geographic degree on the earth's surface. Scholars looked askance at such statements, since they inferred that the designers of the pyramid must have known, not only that the earth was round, but also the length of its circumference. With the determination of the length of a degree longitude in modern times, it became possible to check the validity of these statements, provided the length of the base of one side of the pyramid could be accurately measured.

Early work on the making of such measurements in an exact manner was hampered by the fact that the base of the pyramid had been buried in sand and debris over the centuries, making the base of the structure inaccessible. The best that could be done was to measure the side at the lowest possible level and estimate from the adjacent ground level the increment to be added for the inaccessible part. Such procedures gave results which were regarded as in sufficiently close agreement with the statements by the early Greeks to warrant continuing the investigations of the pyramid.

Another ancient source had indicated that the Greek unit of length known as the *stadium* was supposed to be equal to 1/6000th of a geographical degree. It was known otherwise that the stadium was equivalent to 185 French meters. In the course of measurements, it was found that as near as could be determined, the slant height of the pyramid was 185 meters or one stadium, thus providing further evidence that the dimensions of the structure were indeed related to the circumference of the earth. It was further observed that the perimeter of the structure at the base was related to its vertical height as the radius of a circle is to its circumference indicating that the designers of the structure were familiar with the constant now designated as π .

From these and other observations was born the hypothesis that the Great Pyramid was designed to be a scale model of the northern hemisphere. The missing factor that would serve to add body to the hypothesis was the nature of the unit of length that had been employed by the designers in determining the size of the structure. Even though the pyramid was a massive structure, it was but a mere speck in terms of the size of the earth. Hence if it was designed to be drawn to scale in terms of the earth's circumference, there must have been used some easily expressible ratio in reducing the length of the circumference of the earth to the dimensions of the pyramid. But without a knowledge of the unit used, that ratio remained enigmatic and the hypothesis remained an hypothesis.

This situation led to a search of the ancient writings for references to units of length. One such was the afore mentioned stadium. But since the other measurements were not simple multiples or fractions of this unit, there must have been some smaller unit used. The astronomer, Herschel, had pointed out that the only reliable basis for a standard of measure related to the earth was the polar axis of the earth. This had been recently determined to be 500,500,000 British inches. If the inch were but 1/1000 longer than the British inch, this figure would reduce to the round number 500,000,000. The possibility was entertained that this fraction of the inch could have been lost in the course of the centuries since it was first used as a unit. Herschel pointed out further that 50 such inches would be exactly equal to one ten-millionth of the polar axis and that 25 such units would make a convenient cubit of 25.025 British inches.

In the mean time, John Taylor, editor of the London Observer, had noted that if the daily rotation of the earth on its axis is divided into the orbit of one revolution of the earth about the sun, one obtains this same figure of 25.025. His calculations were initiated on the hunch that possibly the designers of the pyramid had thus arrived at their unit, and had then incorporated this factor of the length of the solar year into the measurements of the structure. If Taylor's hunch was correct, then one side of the base of the pyramid measured in cubits of 25.025 British inches, should be exactly equal to the number of days in a year, i.e., 365.2422 days by modern computations. But up to this point, it had not been possible to get an exact measurement of the base, due to the accumulated sand and debris that had buried the base of the structure.

In 1924, the German Institute in Cairo undertook the task of clearing the rubble from the base to make possible an exact measurement. A professional surveyor was engaged to make the measurements which now could be made with an accuracy of a few millimeters, not only for the base, but also for the slant height and the verticle height. The results revealed that the best previous determinations had been very close to correct and that the deductions were absolutely correct. The possibility that the observed relations were incorporated by chance is infinitely remote.

Thus has been proved as completely as anything can be proved that the designers of the Great Pyramid knew that the earth was round; they knew the circumference of the earth with an astonishing accuracy; they knew that the earth was flattened at the poles; they were well acquainted with the constant ratio π, and they knew the length of the year with an accuracy comparable to that in modern times. As a result of other investigations on the descending passage, it is apparent that they knew also that the earth is tilted on its axis to the extent of about 23½ degrees and that this tilt causes the seasons; they knew also that the earth's celestial north pole describes a slow circle around the pole of the ecliptic causing the precession of the equinoxes. And it is out of the question to suppose that the ancient Greeks of a later time made their statements on the basis of any experimental knowledge, since this information was unknown at the time of these Greek comments.

Yet scholars had had no indication of the existence of any ancient civilization that had a knowledge of mathematics and astronomy that would permit the designing of such a structure based on these dimensions.

Just as the ancient inscriptions provided the clues leading to these investigations and the eventual solution to the problem, so also the ancient writings provide the answer to the question of where the Egyptians obtained this information. Shortly after arriving in Canaan from Chaldea, Abraham found it necessary because of a famine in Canaan, to migrate into Egypt. Referring to this man Abraham, Josephus wrote:[74]

> . . . He was a person of great sagacity, both for understanding all things and persuading his hearers, and not mistaken in his opinions; for which reason he began to have higher notions of virtue than others had, and he determined to renew and to change the opinion all men happened then to have concerning God; . . . This his opinion was derived from the irregular phenomena that were visible both at land and sea, as well as those that happen to the sun, the moon, and all the heavenly bodies. . . .
>
> . . . He [Abraham] communicated to them [the Egyptians] arithmetic, and he delivered to them the science of astronomy; for before Abram came into Egypt, they were unacquainted with those parts of learning. . . .

By the altered chronology defended in this work, the 4th dynasty began with what must have been an approximately simultaneous end to Dynasties I and III. The date for the beginning of the reign of Khufu, first king of Dynasty IV, was calculated on the basis of the setting of the Exodus 34 years after the end of Dynasty XII and the periods of the dynasties encompassing the period back to Khufu. The date falls in the year 1885 B.C. By Biblical chronology, Abraham entered Canaan in 1875 B.C. Khufu then began to reign about 10 years before the migration of Abraham into Canaan. Since the migration into Egypt occurred almost immediately after his entering Canaan, Abraham was in Egypt in the 10th year of Khufu. A building stone was found in the pyramid inscribed with the cartouch of Khufu, followed by the figure 17, which was interpreted to indicate that this particular stone was either quarried or set into the structure in the 17th year of this king. It is reasonable to suppose that 7 years elapsed from the time of Abraham's entrance into Egypt until the setting (or quarrying) of this particular stone.

Needless to say, such an origin of this information to the Egyptians would be met with no greater enthusiasm by modern scholars than was the conclusion of Taylor who saw no other possibility than that the Egyptians obtained their information from God under inspiration. That it was obtained by inspiration — possibly, that it was the Egyptians who were thus inspired — no; the inspiration, if any, was through one, who like the prophets of old, had access to the ear of God.

Notes and References

(1) M-SEC, p. 1. (2) B-EUP, Vol. II, p. 226. (3) *Ibid.* (4) P-HE, Vol. III, p. 255. (5) See note after the name Necherophes in Africanus' transcription of Manetho for Dynasty III (W-M, p. 41). (6) Petrie suggested this explanation (P-HE, Vol. I, p. 30). (7) See Chap. XVII for use of this eclipse in establishing early Assyrian chronology. (8) The author does not subscribe to this opinion of error in dating this eclipse. (9) See M-SEC, p. 352 for an example of the difficulties involved in attempting to date eclipses as early as the 14th century. (10) T-MNHK, p. 218. (11) See ref. 8. (12) For discussions of the Sothic theory and its basis, see M-SEC, p. 27; B-BEC, Vol. IX, pp. 148f.; *Ibid.*, Vol. XXIII, pp. xlv ff. (13) Referred to in C-SH, p. 145; B-HE, p. 32. (14) A reproduction of a summary of the reactions of various scholars to this theory is given as a quotation in ref. 43. (14a) This concept of Meyer relative to the introduction of the Egyptian calendar in 4240 B.C. is now repudiated by scholars, though the application of the theory to the era of the XIIth Dynasty and onward is retained. (14b) See quot. of ref. 8, Chap. III. (14c) See ref. 14a. (14d) See ref. 9 of Chap. III. (15) M-SEC, p. 323. (16) *Ibid.*, p. 234. (17) P-CAE, pp. 30, 31. (18) B-BEC, Vol. IX, p. 151. (19) M-SEC, pp. 28, 31. (20) Referred to in M-SEC, p. 150. See note at bottom of page 148 in B-BEC, Vol. IX. (21) Because of the collpase of this concept of the presumed use of the Sothic period by the Egyp-

tians, there has been a recent shift in thinking to the premise that the Egyptians determined the length of the period by observations of the dates for the high Nile level over a period of years. (22) See note after this name in the Sothis list (W-M, p. 241). (23) *Ibid.*, p. 99. (24) M-SEC, p. 249. (25) *Ibid.*, p. 28. (26) *Ibid.*, p. 193. (27) *Ibid.*, p. 266. (28) See *Ibid.*, p. 30 for summary of probable calendar changes. (29) *Ibid.*, p. 234. (30) P-HE, Vol. I, p. 95. (31) B-BEC, Vol. IX, p. 153. (32) M-SEC, p. 192f. (33) *Ibid.*, p. 194 has a reference to Weill on this point. (34) B-BEC, Vol. XXIII, p.L of introduction. (35) M-SEC, pp. 146f. (36) D-GP, Chap. I. (37) M-SEC, p. 28. (38) See ref. 36. (39) This date, as a close approximation, is virtually universally accepted. (40) *Ibid.* (41) P-HE, Vol. I, addenda, pp. xvii, xviii. (42) See Chap. IX, quot. of ref. 17, and Chap. XIV (Vol. I) on the placement of the Hyksos invasion in Dynasty XIII. (43) M-SEC, pp. 9, 10. (44) B-EUP, Vol. I, p. 211. (45) K-AHL, p. 195. (46) Referred to in B-BEC, Vol. IX, p. 148. (47) P-HE, Vol. III, p. 251. (48) *Ibid.*, p. 274. (48a) Theon of Alexandria, op. cit., I:30; cited by Odom in O-VVPW (*Andrews Univ. Seminary Studies*, 1965), p. 120. (49) M-SEC, p. 195; P-HE, Vol. II, p. 32. (50) Breasted held some such opinion (B-HE, p. 39). (51) P-HE, Vol. II, pp. 30ff. (52) Calculated from data provided in M-SEC, p. 196. (53) P-HE, Vol. II, p. 33, 34. (54) By the revision, the period from Ahmose to Merneptah is 325 years, compared to 380 years by current views. Cf. Figs. 10-12 of Vol. I. (55) P-HE, Vol. II, p. 31. (56) M-SEC, p. 195. (57) Since he could not have been 30 years of age in his 33rd year of reign. (58) P-PE, Vol. II, p. 32. The acceptance of this coincidence of Sed Festival celebrations is not vital to the reasoning employed. However, since this concept does not raise problems, it is used as the basis of calculations here. (59) This age for Thutmose III at the time of accession is higher than most previous suggestions, but we find no data to preclude this conclusion. (60) B-HE, p. 266. Note the chapter heading. (61) See monograph, E-TS. (62) Fig. 1. (63) P-HE, Vol. II, p. 76; his mummy indicates that he was not healthy. (64) Some have entertained the possibility that Thutmose III was the son of Thutmose I. Edgerton concluded that he was the son of Thutmose II, which view is here accepted. (65) Assumed on the basis of data provided in Table XIV, Vol. I, and applied in Fig. 10. The assumption is confirmed by the subsequent chronology. (66) E-TS, p. 42. (67) See Fig. 1. (68) These figures are in essential agreement with Petrie (P-HE, Vol. III, p. 107). (60) D-GP. (70) Cf. Gen. 7:11 and 8:3, 4. (71) Lev. 23:39. (72) See SDABC, Vol. IX, "Calendar, Jewish." (73) The developments in these investigations were reviewed by Tomkins (winter issue, 1971, of *Horizon* from which the subsequent details are gleaned). See also R-EH, p. 3. (74) J-AJ, Bk. I, Chap. VII, par. 1; *Ibid.*, Chap. VIII, par. 3.

CHAPTER V

THE PLACEMENT OF DYNASTY XII IN THE ARCHAEOLOGICAL AGES

In the course of the developments outlined in the previous phases of this work, numerous problems have been provided solutions when it is recognied that the archaeology of Palestine is currently being interpreted against a background offset from true history by more than 600 years. The proper background for the incident of the Exodus is to be found at the end of Early Bronze, currently assigned a position at the end of Dynasty VI in Egypt,[1] with the Conquest set 40 years later. Other evidence has indicated a placement of the Exodus incident late in Dynasty XIII, shortly after the close of Dynasty XII.[2] These placements require a recognition that Dynasties VI, XII, and XIII were roughly parallel in time and that, contrary to popular opinion, Dynasty XII *did not* follow Dynasty VI after an interval variously defined as 50 to 200+ years. Since Dynasty VI clearly belongs in the late Early Bronze Age, it follows that Dynasty XII and early Dynasty XIII also belong to late Early Bronze and not in Middle Bronze as is currently held.

The position of Dynasty XII in the Archaeological Ages thus becomes a matter of critical importance in the evaluation of this altered chronology. If it is a proven fact that the beginning of Dynasty XII belongs in the era of Middle Bronze, then no other conclusion is possible than the placement of Manetho's Dynasties VII to XI between Dynasties VI and XII as is currently done. There would then be no choice but to dismiss the contentions of this work in spite of the numerous problems that are provided solutions by this altered chronology. In other words, the proposed revision here defended stands or falls with the nonvalidity or validity of the evidence that has been used to support the placement of Dynasty XII in Middle Bronze.

By the same token, if it can be shown that the evidence used for such support has been misinterpreted and that the interpretation is open to severe question, then the large number of solutions to problems provided should be recognized as confirming the general correctness of the altered structure. *The aim of this chapter is to demonstrate that the* *evidence used to support this placement of Dynasty XII is not solid and that the popular interpretation of this evidence is highly questionable.* The faulty interpretation of this evidence depends on premises that have *not* been proved, and which in fact require violation of the very rules on which the science of archaeology rests.

Our task then falls into four categories: (1) to review briefly the numerous problems that are inherent in the current views but which are provided satisfactory solutions by the revision, (2) to point out the fallacies in the current interpretations of the evidence purported to provide the basis for placement of Dynasty XII in Middle Bronze, (3) to provide an altered and rational interpretation of these evidences within the framework provided by the revision, and (4) to show how and why it has been possible for scholars to avoid the implications of these numerous discrepancies.

I. The Incongruous Background Provided by Current Views for Incidents Recorded in Scripture

The examples noted here have been treated in greater detail in other sections of this work. *They are gathered together here to emphasize the magnitude of the array of evidence* and as a review basis for the subsequent discussion. This review becomes of importance for the proper evaluation of the claims made to the effect that there are no significant discrepancies between Scripture as it reads and archaeology as popularly interpreted.[3] Such claims are, of course, true for the *facts* of archaeology; they are misleading if reference is to the interpretations placed on these facts. Vast sections of Scripture must be compromised if the currently accepted interpretations of archaeology are taken at face value.

If one starts with the premise that the interpretations of archaeology are above question, even in their larger aspects, and then interprets Scripture in line with these interpretations, how could it be otherwise than that there would be no apparent discrepancies of significance. This would be analagous to measuring a given fixed length with a rule that defines a foot as equal to six inches, then insisting that there is no discrepancy between the determined length and the rule used. The discrepancy is rather with the genuine rule which defines the foot as equal to twelve inches.

Biblical archaeology does not claim to interpret its observations in terms of Scripture.[4] *It is rather evaluating Scripture in terms of the interpretations placed on archaeological observations.* The apparent discrepancies are then taken as evidence that the meaning of Scripture must be modified, and once modified to fit the interpretations, there are then no serious discrepancies between the two. Statements to the effect that one does not have to sacrifice his faith in the historicity of Scripture in accepting these interpretations of archaeology are, to say the least, misleading. As of the present moment, these discrepancies are so numerous and of such magnitude that they stand to challenge the very foundations of Christian beliefs that have their basis in Scriptural teachings.[5] How could it be otherwise, since these interpretations are based on the premises provided by the Higher Criticism? *In fairness to readers, these claims of agreement should be accompanied by a qualification that the term Scripture is used to refer to Scripture as modified in its meaning and significance by the Higher Criticism and not to Scripture as it reads.*

II. Anachronistic Backgrounds Related to the Conquest Under Joshua

While the placement of the Conquest by current views reveals widespread destruction in Palestine archaeologically, as is to be expected from the Biblical account, *the destructions of individual sites are invariably followed by a revival of the same pottery types as were in previous use.*[6] *This situation is in contradiction to the reasonable expectation of the appearance of a new culture at the point of the conquest of a territory followed by subsequent occupation by the conquerors.*[7] Furthermore, these destructions do not represent a unified conquest within the brief period stated in Scripture. They are rather spread over a period of a century and a half or more. If one proposes to interpret the Amarna Letters to represent this conquest, as is commonly done by proponents of the XVIIIth Dynasty setting of the Exodus, he is faced also with the fact that these letters present a picture of coincident political difficulty over widely separated areas, some of which even extended into territory never occupied by the Israelites, and not to a unified effort toward the conquest of one city at a time as indicated in

Scripture. Specifically, the destruction currently associated with the Israelite conquest of the site of Lachish is separated by many years from destructions of other sites similarly associated while Scripture states that the site was taken during the brief initial phase of the Conquest.[8]

The absence of the expected evidence of a new culture at the point assigned archaeologically to the Conquest has demanded in turn the concept that the Hebrews had no culture of their own.[9] It must be presumed that their culture throughout their occupation of Palestine was totally derivative from the heathen whom they displaced. This derived culture must include their religion, their literature, their use of writing, and their architectural and ceramic designs. Such a conclusion is incongruous in the face of Scriptural references to the use of writing prior to the Conquest and a clearly expressed origin of their religion and literature in a totally different manner.

While archaeology reveals that the destruction at Ai and at Jericho belong to a common era as stated in Scripture,[10] these destructions are dated some 600 years earlier than any possible date based on Scripture.[11] This fact is of unusual interest and significance, since these walls were universally recognized as those that fell at the time of the Conquest, that is, until elucidation of the *relative* chronology based on the accepted starting premises demanded a backward movement in time to the end of the Early Bronze Age.[12] It appears that, with the recent investigations at Ai, all explanations for the anachronism relative to the date of its final destruction have been eliminated, except as an inaccuracy in the Scriptural account is recognized.[13]

According to Glueck, there was no sedentary occupation of southern Transjordan at the time attributed to the Conquest by the XVIIIth Dynasty setting of the Exodus.[14] Yet Scripture refers to a number of cities as being in this area at that time.[15] This situation has been used as a support for the XIXth Dynasty placement of this incident, though such a setting results in a necessary severe accomodation in the chronology of the era of the Judges.[16] Against the XVIIIth Dynasty setting are the serious anomalies that follow from the presumed identification of the Habiru of the Amarna Letters with the invading Hebrews.[17]

Archaeology has the Philistines appearing in the area south of Palestine for the first time in conjunction with the invasion of the Sea Peoples (c. 1200 B.C. by popular views). This is contrary to Scripture, which indicates the presence of the Philistines in the territory from the time of Abraham.[18]

III. The Anachronistic Background to the Era of the Oppression

With the two current concepts entertained on the placement of the Exodus, there are two backgrounds to be considered for the Oppression. Each has its own unique discrepancies with Scripture; in addition there are other anachronisms that are common to both. Scripture indicates a large building program under Israelite slave labor, including the building of the cities Pithom and Raamses.[19] No evidences of any significant building program in the Delta region, where the Israelites dwelt, have been found that can be attributed to any XVIIIth Dynasty king.[20] Scripture also places the king's palace in close proximity to the enslaved Israelites.[21] This location of the palace and capital continued from the time of the birth of Moses to the time of his flight to Midian 40 years later and was not a mere temporary arrangement, as some have assumed as a basis for bypassing this anachronism.[22] No king of the XVIIIth Dynasty had his palace or capital in this area. Uniformly, these kings ruled from sites far to the south.[23] It is a further anachronism to suppose that the period of the Oppression encompassed the reign of Hatshepsut, predecessor of Thutmose III. Hatshepsut was a peaceful soul whose primary ambition was the beautification of her capital at Thebes.[24] Thutmose III, as her coregent, waited impatiently for 22 years for her rule to end so that he could initiate his program of foreign conquest, an ambition for which Hatshepsut had no inclination whatever.

While these anachronisms in the setting of the Oppression in the XVIIIth Dynasty *appear* to be eliminated by the XIXth Dynasty placement, this is not altogether true. Merneptah's inscription demands a recognition of the presence of the Israelites in Palestine by the 5th year of his reign,[25] eliminating the earlier proposed identification of this king as the pharaoh of the Exodus. Since all other statements in this inscription deal with political problems, the attempt to make an agricultural disaster out of the statement "her seed is not," relative to Israel, gives rise to an incongruity of no mean proportions. Yet to recognize that this statement should also be interpreted as having a political implication calls for a Conquest significantly more than 40 years prior to the 5th year of Merneptah[26] and of necessity takes us back at least into the very early years of Rameses II, and more probably earlier, for the incident of the Exodus. This in turn demands an initiation of the enslavement of Israel many years before the reign of Rameses II and a placement of the era of the Oppression during the reigns of the weak predecessors of Rameses II, none of whom was a builder of any significance.

None of these predecessors of Rameses II, save perhaps Seti I, maintained a capital in the Delta area, and Seti I was not a builder; his interests were almost altogether in the direction of foreign conquest. Certainly one can hardly envision the Oppression as either initiated by, or encompassed by the reign of Amenhotep IV (Akhnaten) who had his capital at his newly built city of Akhetaten at el Amarna and whose interest was deeply rooted in his new religion.

IV. The Anachronistic Background to the Incident of the Exodus

Both current placements of the Exodus suffer in being set against a background that does not provide the evidence of crisis in Egypt to be expected from the details provided in Scripture.[27] To avoid the implications of the expected crisis, it has been necessary to make severe alterations in the Scriptural accounts relative to the number of escapees and the significance of the plagues and of the debacle at the Red Sea. As devious as are the proposed accomodations, these do not provide anything resembling satisfactory explanations for the discrepancies. The reduction of the number of escapees to "more manageable proportions"[28] does not explain how even this reduced number could make their way to Palestine by the route described in Scripture.[29] The reduction of the significance of the plagues to the level of origin in a series of incidents resulting from not too-unusual weather conditions[30] does not explain the unhindered release of the unarmed slaves while the pharaoh had an army at his disposal, and makes the pharaoh a very stupid individual except as he recognized clearly the appearance and disappearance of the plagues at the command of Moses.

To reduce the pursuing Egyptian army to a mere task force does not explain why the pharaoh did not use his more complete army to prevent their escape in the first place. Even if there had been far less by way of catastrophe to Egypt than that indicated by the Scriptural account, the incident of the Exodus could be expected to have been the signal for revolt on the part of the tribute paying peoples, resulting in a loss of the Egyptian Empire at this time.[31] There is no adequate evidence to reveal even a minor crisis in Egypt at the points now mominated as the background for the Exodus.

V. The Anomalous Background to the Incident of the Descent

The incident of the descent of the Israelites from Palestine into Egypt is commonly placed in the Hyksos era preceding Dynasty XVIII. This may be considered as feasible chronologically by either placement. This is possible since the proponents of the XVIIIth Dynasty setting commonly recognize a period of only 215 years of sojourn in Egypt, while the proponents of the XIXth Dynasty setting either take this period as 430 years or place no confidence in the Scripture figures. In any case, the Hyksos period is anachronistic to the incident of the Descent in terms of the data provided by Scripture.

It has been claimed that the Hyksos era does provide a proper background for the Descent, since the Hyksos were shepherds and would have no prejudice toward the Israelite migrants who were also shepherds. The Egyptians on the other hand, held shepherds in disrepute.[32] Admittedly the verses in Genesis 46:31 to 47:6 suggest such an interpretation, but this is not a necessary interpretation. The verses also suggest that it was the *area* of settlement that was the crucial detail, and that the objection could be alleviated by the selection of the area of Goshen for occupation. While it is not stated what the factors were that would make their settlement in Goshen satisfactory in spite of this prejudice, the assumption that a Hyksos king would have any particular regard for the opinions of the Egyptians is highly improbable.

The fact that the pharaoah of the Exodus, who was certainly an Egyptian, was willing to suggest a solution to another problem involving what the Egyptian people regarded as an abomination, without respect to their wishes (Ex. 8:26) indicates that such prejudices were matters of secondary importance. It is further suggested in the story that it was not the ownership of sheep that was the point of prejudice, since the Egyptians in general owned their own sheep.[33] Evidently it was the *occupation* as shepherds that was the matter of prejudice; for what reasons, we are not told. In any case, the story does not require recognition that the Descent occurred under a Hyksos king.

The background by current views is also anomalous with reference to the famine phase of the account. References to famine are profuse in the Egyptian inscriptions.[34] Two of these references mention an extended famine for which preparation was made in advance, the accumulated food having been distributed to the people during the famine.[35] Yet no famine inscription can be dated even approximately in a proper position relative to the proposed dates for the Exodus. Neither can it be reasonably supposed that the Scripture narrative is an adaptation of the Egyptian, since the Egyptians had no means of predicting famines in order to prepare for such in advance. Neither can it be presumed that the Egyptian references are a reflection of the Israelite incident, since by current views these inscriptions of famine antedate the positions assigned to the Descent. By the chronological revision, both these references to famine fall into line relative to the position of the Exodus.[36]

VI. Anachronistic Backgrounds for Incidents During the Period of the Judges

The XIXth Dynasty setting of the Exodus leaves a highly abbreviated period for the Judges which is at gross odds with Scripture.[37] The XVIIIth Dynasty setting shares with the XIXth Dynasty setting the necessity of recognizing a date late in the era of the Judges for the coming of the Philistines into the area south of Palestine, since there is no evidence of Philistine pottery in this area until the end of Middle Bronze.[38] This is contradictory to Scripture, which indicates the presence of Philistines in this area from the time of the Exodus, the Conquest, and even back to the time of Abraham.[39]

On further examination of the chronology involved, the massive temple at Shechem, which had been regarded as certainly that mentioned in the story of Abimelech, required movement back in time by a plurality of centuries.[40] This move is similar to that necessitated by a re-examination of the evidence at Jericho. The altered interpretation left only a few pits containing debris and charcoal to represent the destruction of the temple and of the entire city that contained it.[41]

While it is clear from Scripture that Israel occupied the site of Megiddo following the victory of Deborah and Barak,[42] there is no evidence of such occupation archaeologically short of the last years before the reign of Saul.[43] While the Philistines certainly occupied Beth Shan at the time of Saul,[44] no indication of Philistine pottery was found this early at this site and so meager an amount at neighboring Megiddo that an occupation cannot be inferred.[45] Still other discrepancies at other sites are of such a nature that a brief review is not feasible here; these have been noted under proper headings elsewhere in this work.

VII. Anachronisms from the Era of the Monarachy of Israel

The anachronism involved in the identification of Shishak of Scripture with Sheshonk of Dynasty XXII and of Scriptural Zerah with Osorkon of the same dynasty have been previously noted.[46]

Scripture tells us that Jeroboam rebuilt the city of Shechem.[47] Archaeologically, this rebuilding is represented by current interpretations as nothing more than a mere patching up job of certain limited portions of the walls of the city.[48] At Megiddo, the stables earlier assigned to Solomon with certainty on the basis of I Kings 10:26, on further investigation, required abandonment of this view; the stables belonged to a later era.[49] This and similar necessary abandonments of interpretations once regarded as certain, illustrate the questionable nature of proposed synchronims based on situations that are in no sense unique, while leaving the more unique incidents as anachronisms. It could be expected that in this general era, most any king would have had stables and chariots at this important defense site.

VIII. *Anachronisms Not Primarily Related to Incidents of Scripture*

If the only anachronisms of archaeological interpretation were those related to incidents referred to in Scripture, there might be some basis for the current belief that it is Scripture that is not reliable in its accounts. But this is far from the actual situation. The accepted chronology of Egypt leaves us with a significant number of anachronisms not particularly related to Scripture, some of which are so obvious that the attempts at explanation only emphasize the magnitude of the difficulties.

IX. *The Anachronism of the Hyksos Empire*

In the opinion of the writer, one of the most inexcusable errors in the interpretations of archaeology is that which has envisioned a Hyksos empire encompassing all of Egypt, all of western Asia, and reaching into Transjordan and the area of Mesopotamia and even into the islands of the Mediterranean. Such an empire would compare favorably with any of the other recognized empires of antiquity, including those of Assyria, Babylon, Persia, and Greece and would certainly be more extensive than anything ever controlled by Egypt or the Hittites. Yet the extant evidence supporting this concept of a vast Hyksos empire is limited to a number of scarabs found in Palestine, of questionable Hyksos origin or identity, and a few items carrying the name of Khyan who is believed to have been a Hyksos king, but whose name does not appear in Manetho's list of Hyksos kings. This latter list of evidences includes five scarabs, two cylinder seals, a small carved lion (too large to carry in one's pocket!) found at Bagdad, a vase lid found in Crete, and the lower part of a broken statue found at Bubastis in northern Egypt.[50] Differing from all other empires of antiquity, all other evidences for the existence of this hypothetical empire have disappeared.

It is on the appearance of this name Khyan on these items upon which the Hyksos origin of these items depends.[51] Yet the style of the scarabs bearing this name is that from the era of the VIth and IXth Dynasties, and not from the Hyksos era as currently defined.[52]

> Now, both of these types [of scarab decoration] are common on the scarabs of Pepy [Dynasty VI], and also in those of Maa-ab-ra of the

> IXth dynasty. But, on the other hand, not a single scarab of the XIIth, or later dynasties, is known with such designs. It is therefore impossible to assign this king [Khyan] to the Hyksos period as was supposed at first.

This Khyan has the title *Heq Setu* (Prince of the Hills), suggesting that he was a chieftain of the desert tribes of the east. In any case, he makes no claim to have ever been a king of Egypt, though as noted above, certain items bearing his name have been found in Egypt. While other evidences have been pointed to as of Hyksos origin, these do not carry inscriptions to verify such an origin, and the proposed identifications are purely speculative. All other evidences than those noted above for this hypothetical empire have strangely vanished.[53]

> . . . Meagre as these data are, one cannot contemplate them without seeing conjured up before him the vision of a vanished empire which once stretched from the Euphrates to the first cataract of the Nile, an empire of which all other evidence has perished. . . .

Breasted (author of the above quotation) is not alone in recognizing the ephemoral and visionary nature of this empire. Albright commented thus:[54]

> . . . By this time horse-drawn chariotry had been introduced as the most important instrument of warfare, and *we must picture* the northern hordes [Hyksos] as sweeping through Palestine and Egypt in swift chariots, with footmen playing a strictly subordinate role. [Emphasis ours.]

Now, no intelligent person is going to presume to create an empire out of these meager evidences. Since this concept seems to have been accepted by the scholarly (intelligent) world rather universally, it will be necessary for us to look behind the curtain for the real reasons why the existence of such an ephemoral and unrealistic empire has been so widely accepted without reservation. In so doing, we find that the real basis for this unrealistic conclusion is the pressure of a series of unproven and unprovable hypotheses which have never merited the confidence that has been placed in them.

Of these uninscribed and questionable evidences, the one that has evidently influenced the thinking of scholars to the greatest degree is the appearance in Palestine and elsewhere of a new type of fortification.[55]

> To the mixture the coming of the Hyksos chieftains added little. From the material remains one would never deduce the setting up of a new ruling class, with its alien Hurrian elements, if it were not for the appearance of the new type of fortification.

Not all scholars have been willing to accept the appearance of this new type of fortification as indicating that the invaders swept through Palestine and Egypt in swift chariots as hypothesized by Albright, even though new fortification types may well reflect the introduction of a new type of warfare.[56]

> Such an entirely new system of defence must certainly have been introduced from outside. It must also reflect new conditions of warfare, for it is axiomatic in military history that new systems of defense are the sequel to the appearance of new methods of attack. It does not seem possible to identify these new methods of attack either as chariot warfare, for there is no satisfactory evidence of the use of chariots in this area until the time of the Eighteenth Dynasty, or of the use of archery, for bronze arrowheads are not found in Palestine until the late Bronze Age.

The identification of this new type of fortification as of Hyksos origin is based on the identification as Hyksos of this same type defense in Egypt at Tell el Yehudiyeh in the southern Delta region.[57]

> The clue to the problem lies in the fact that this type of defence is not confined to Palestine. To the south, at Tell el Yehudiyeh in the Egyptian Delta, a great plaster-faced sand bank, still 41 feet high, surrounds an area of more than 23 acres. . . The same types of defence can be traced even farther north [of Palestine] at places like Carchemish. It would seem that the method of defense came south to Palestine and Egypt, and we may with some certainty [*sic*] ascribe its introduction to the Hyksos who secured control over northern Egypt c. 1730 B.C.

The original basis for this identification as Hyksos was the further supposition that the site of Tell el Yehudiyeh was the same as the chief camp of the Hyksos at Avaris, a site otherwise clearly to be associated with the stronghold of their last stand before their expulsion from Egypt and from which they are recognized as having ruled over Egypt.[58]

> The age of the Hyksos has been lighted by the discovery of an immense earthen camp at Tell el Yehudiyeh which shows that they were unacquainted with either stone or timber construction, and trusted to archery for defence. The position seems to agree with that of their chief camp at Avaris.

This basis for identification became unacceptable with the discovery that Tell el Yehudiyeh was *not* the same as the site of the Hyksos camp at Avaris; this was later found to be located far to the east of Tell el Yehudiyeh and to be the same site that was later rebuilt by Rameses II as his capital.[59] It is of significance also to note that the camp at Avaris did *not* have this type of fortification. In spite of the evident error in equating the fortification at Tell el Yehudiyeh with the stronghold at Avaris, the identification of the fortification as of Hyksos origin was retained. This Hyksos origin was carried over to the identification of the nearby graves and this in turn provided the basis for accepting the pottery and scarabs in the graves as index items for identiying similar pottery and scarabs found elsewhere.[60]

> . . . Graves of this age were found near and in the camp; and the connection of the styles of scarabs and of black incised pottery gave a basis for the classifying of the Hyksos scarabs by style.

Since similar fortifications, similar pottery, and similar scarabs were found at several sites in Palestine, these were also identified as of Hyksos origin, thus apparently confirming the hypothesis of a Hyksos occupation of this territory, though the scarabs bearing the name Khyan and also regarded as of Hyksos origin were not of the same design. The finds of the small carved and inscribed lion at Bagdad and the inscribed vase lid in Crete were then taken as evidence that this occupation must have included these distant areas also, and we have "conjured" up before us the vision of a vanished empire, an empire for which all other evidence has strangely vanished. This situation provides an impressive illustration of the lengths to which even brilliant scholarship can go when a theory is based on a sequence of other theories, having forgotten that the initial theory in the series was never established as a basis for sound archaeological interpretation.

As is to be expected, the weak supports for this concept of a Hyksos empire give rise to some very large questions for which we are not provided credible answers. If this fortification at Tell el Yehudiyeh is of Hyksos origin, then who did the enormous amount of actual labor involved in the construction of this huge mound 40 feet high and covering an area of 23 acres? Are we to believe that the Hyksos themselves performed this labor? With the evidence that the Hyksos were all but totally nonproductive otherwise, it is difficult to conceive of the Hyksos undertaking any such project. Or did they enslave the Egyptians to do this labor? If so, then the associated graves should also be identified as Egyptian, which they clearly are not. And what is to be done with the violent anachronism that rises from the recognized extremes of cultural level in Palestine in contrast to that in Egypt for the same period if both represent Hyksos control?[61] The period of Hyksos domination in Egypt represented the nadir of the entire dynastic period. In Palestine, this same era represents the acme of culture, trade, and prosperity.

That other unwarranted assumptions have had their origins as corollaries of the popular concept of a Hyksos empire is abundantly clear. There is no proof at all that the Hyksos invented or used the chariot as a weapon of war. Yet this assumption has been used as evidence that the Scriptural reference to chariots from the time of Joseph *must* be interpreted to indicate that the era is that of the Hyksos. It has been simply *assumed* that the Hyksos must have had some unusual weapon to successfully invade Egypt. The Hyksos left no inscriptions of any kind, and the few of Egyptian origin referring back to this period make no mention of chariots.

The entire concept of a position of Dynasty XII in Middle Bronze has this supposition of a Hyksos empire as one of its major supports. The remaining evidence thus erroneously interpreted will be considered in due time.[62] The problems of where the Hyksos came from and what became of them after their expulsion from Egypt have not been provided satisfactory solutions within the framework of current views.

This picture, horribly blurred and out of focus, is totally clarified by the chronological revision proposed in this work which recognizes this fortification at Tell el Yehudiyeh as of Israelite origin under slave labor (though not necessarily of Israelite invention). The near-by graves are then also those of Israelites who died as slaves in the course of construction. The black incised pottery in the graves, found also in Palestine[63] in the subsequent era is but the remnant of the pottery carried there by the Israelites. The scarabs in the graves, found also throughout Palestine, were either scarabs treasured by the Israelites from their period of sojourn, or were part of the materials pressed upon them by the Egyptians to hasten their departure.[64] This interpretation is confirmed by the appearance of several scarabs of Sesostris I[65] with whom the Israelites were on the best of terms, since it was he who ruled at the time of the famine. Still others carry the name of Jacob.[66]

The prosperity in Palestine is not to be credited to the Hyksos, but to the Israelites.[67] It was the Israelites who introduced the use of the fast wheel in making pottery; it was the Israelites who introduced the use of bronze and the production of iron in quantity. The sudden rise in cultural level at this time is also to be credited to the Israelites. The time is centuries before the use of writing in Phoenicia by the Canaanites or the appearance in their literature of concepts suggesting a relation to Israelite literature. If there was any copying of culture, it was the heathen neighbors who copied the more advanced culture of the Israelites, not *vice versa.* A number of other problems are provided answers in the more complete discussion of Chapter XVI of Volume I.

X. *Anachronisms Related to the Proposed Identification of Sheshonk I with Shishak of Scripture*

The identification of Sheshonk I of Dynasty XXII with the Shishak of Scripture who sacked Solomon's temple (c. 934 B.C.) is popularly regarded as a synchronism — a synchronism so obvious that it has served as an apparently impassible obstacle to any attempt to alter the chronology of Egypt for the period of late Egyptian history. Actually, this is not a synchronism; it is an anachronism — an anachronism not alone with Scripture, but even more so with Assyrian history. At the same time, there are introduced by its acceptance gross inconsistencies in the resulting history of Egypt.

The proposed evidence of an invasion of Palestine by Sheshonk I is wholly inadequate to meet the specifications of Scripture. Details in the inscription of Sheshonk I clearly belong to a period long since in the past when related to the history of Palestine for the time of Asa, during whose reign the invasion of Shishak occurred.[68] Sheshonk is an Assyrian name, as are also the names of the other kings of this dynasty.[69] Yet at the time of the sacking of Solomon's temple, Assyria was at its nadir of power and influence. It is preposterous that Assyria could at that time provide kings to the throne of Egypt.[70] To avoid the implications of this obvious fact, Dynasty XXII has been assigned a Libyan origin, in spite of the obvious Assyrian origin of the names of its kings.[71] This concept is supported only by the most trivial sort of evidence.[72] But for the era some three centuries later, there is abundant evidence of the occupation and partial control of Egypt by the Assyrians. Some of the same Assyrian names from the era of Dynasty XXII appear in inscriptions of this later era.[73] That this later era *is* the proper position for Dynasty XXII is confirmed by inscriptions from both Egypt and Assyria to the effect that Assyrian armies were in at least partial control of Egypt and that Assyrian governors had been placed in the important cities.

The identification of Sheshonk I with Shishak of Scripture demands that we also recognize Osorkon I, his successor, as the Zerah of Scripture, who invaded Palestine in the reign of Asa of Judah with a million men.[75] Yet Osorkon I was even less able to raise an invading army than was Sheshonk I. It is extremely doubtful if Osorkon I ever marched a dozen men of war across the isthmus, to say nothing of raising a large army of invasion. To evade the implications of this anachronsim, it has been assumed that this Zerah was not at the head of an Egyptian army, but rather of an Arabian army. The details of Scripture simply do not permit any such assumption.[76]

Some destruction of cities is revealed archaeologically in Palestine for the period assigned to Sheshonk I. Scripture, however, says nothing about destruction of cities at this time, and strongly infers that it was only the temple at Jerusalem that was the victim of destruction.[77] Josephus, in agreement with the Scriptural inference, states specifically that Shishak did not destroy these cities; rather, they were spared by opening the gates without a battle.[78] If it had been necessary for Shishak to lay siege to these numerous cities, the invasion would have required a succession of annual invasions prior to the arrival at Jerusalem. Neither Scripture nor the inscription of Sheshonk I provides any suggestion of such a prolonged war.

By the proposed revision, this incident occurred during the reign of Thutmose III of Dynasty XVIII. Positive evidence for recognizing in Thutmose III the Shishak of Scripture is extant in the pictorial inscription of this king. This inscription pictures item after item belonging to the loot taken from Solomon's temple and from his treasure house.[79] Among these items are the 300 shields of gold, even the number agreeing with the figure given in Scripture, the six branched golden candlestick, the altar of incense, the showbread, the priestly garments, and a variety of other items. The similarity of names carries no weight in the face of this evidence. It is quite evident that the kings of Egypt were often known in other countries (particularly Palestine and Greece) by names that have little or no resemblance to the Egyptian names.[80]

XI. Anachronisms Between Greece and Egypt

The anachronism rising from recognizing the first appearance of the Philistines in the area of southern Palestine at the time of the invasion of Egypt by the Sea Peoples shortly after the reign of Rameses II (currently dated 1225-1200 B.C.) has been noted previously.[81] This situation is an even more serious anachronism in relation to Greek history. The migration of the Sea Peoples from Greece and the surrounding territories had its origin in the invasion of southern Greece by the Dorians from northern Greece (c. 1100 B.C.)[82] The anachronism here is that of having a cause follow its result by a full century.[83]

The anachronism in the order of these incidents is removed by the revision which retains the composition and relative placement of Manetho's Dynasty XIX as an offshoot from Dynasty XVIII at the time of Seti I, [84] in contrast to the current view which has these two dynasties ruling in succession. The dates, however, would remain anachronistic, except as it is also recognized that the unexplainable hiatus in Greek history (11-8th centuries) is but a necessary creation of modern scholars to meet the demands of an otherwise erroneous chronology. The hiatus is nonexistent, and the incidents now dated several centuries before the Dorian Invasion should be moved forward to fill this gap.[85] This is permissible and rational, since there are no known incidents or historical personages known to belong to this "dark period." This same gap appears in the currently accepted chronology of the Hittites[86] and appears repeatedly in the interpretations of the archaeology of a number of other sites.[87] Strangely, Aeneas appears as a character in Virgil as a contemporary of Dido and the founding of Carthage in the 8th century, though he belongs to the Trojan war era, dated c. 1180 B.C. To evade the implications of this anachronism, it has been presumed that the writer had deliberately taken characters from two eras separated by centuries and placed them in the same account to make a good story.[88] A further glaring anachronism appears with the discovery in Egypt of Greek writing which archaeologists date centuries before there is any evidence of its use in Greece,[89] indicating that Egyptian history is also offset from true Greek history by a multiplicity of centuries.

XII. Anachronisms Involving the Hittites

Hittite history is tied to Egyptian history by several clear-cut synchronisms.[90] If it is true, as claimed in this work, that Egyptian chronology has been set too far back on the B.C. time scale in terms of Palestinian history, then so also is this true of Hittite chronology. This erroneous correlation with Palestinian history should then be reflected by serious anachronisms between the Hittites and Palestine. If we are correct in labelling the proposed identity of Sheshonk I of Egypt with Shishak of Scripture as an anachronism, further anachronisms should appear between the Hittites and Assyria.

The final end of the Hittite kingdom and the fall of the last of the city states to the Assyrians can be synchronized approximately, but with certainty, to the end of the reign of Rameses II (c. 1225 B.C. by current views).[91] Yet the Assyrian inscriptions continue to refer to the land of the Hittites and to the Hittites as a people with kings over them and with armies of military importance half a millennium after 1200 B.C. as defined by late Palestine chronology.[92] In this late era, unequivocal synchronisms appear between Egypt and Assyria and between Israel and Egypt and between Israel and Assyria to make a recognition of the continuation of Hittite culture into this late era inescapable. Among the Hittite kings mentioned in the late Assyrian inscriptions is the name of Suppiluliumas who was defeated in battle by

Shalmaneser III (858-824 B.C.).[93] Suppiluliumas is currently dated in the 14th century B.C. to meet the synchronism with Tutenkhamen of Egypt.[94]

To maintain a Hittite chronology synchronized with Egyptian chronology, it is necessary to assume an inexplainable gap of half a millennium between the fall of the last of the Hittite city-states and the survival of Hittite culture to the end of the 8th century.[95] This gap encompasses the period of a similar unexplained gap in the history of Greece[96] and of assumed archaeological gaps in a number of other sites.

The Hittites of archaeology have their home far to the north in Asia Minor, and there is no evidence of their ever having occupied any territory in southern Palestine where Scripture places the Hittites. This perplexing discrepancy[97] is provided a total and simple solution by the altered chronological structure. The Hittites of Asia Minor are a people who came there from Europe and absorbed the remnants of the Biblical Hittites who were driven out of Palestine at the time of the conquest under Joshua.[98]

XIII. The Anachronisms of the 400-year Inscription

Rameses II left an inscription, written very early in his reign (1290-1223 B.C. by current views), commemorating some unstated incident 400 years earlier.[99] The 400 years of this inscription has been interpreted as elapsed time, taking us back into the Hyksos era as the background for the unstated incident. Nothing could be more anomalous than the selection of an obscure incident during the period of domination of Egypt by the Hyksos as a basis for defining dates in the subsequent history of Egypt. When this 400 years is interpreted in the same manner as is necessary for many other such references to ancient time periods, i.e., as representing simply a summation of intervening reigns without consideration of overlapping or parallelism,[100] the figure 400 takes us back to the very era of the driving of the Hyksos out of Egypt. While this holds true for the revised chronology, an abbreviation of the period is involved which is not possible within the framework of current views.[101] The incident of driving the Hyksos out of Egypt was one that could well be used as an incident to which subsequent dates could be related.

The name of the king ruling in Egypt at the beginning of this 400-year period is stated in the inscription to be Set-aa-pehti-nubti. The Suten Bat name of Ahmose I, the first king of Egypt following the expulsion of the Hyksos, was Ra-neb-pehti.[102] The essential differences between the two names are in the name of the god (Ra instead of Set) and a variation in the order of the hieroglyphs, a situation noted commonly in the transliteration of Egyptian names. This identification makes sense and is but one of numerous other confirmations of the altered structure.

XIV. The Anachronisms Related to Manetho's XIth Dynasty

The XIth Dynasty, as envisioned by Manetho, must have preceded the XIIth, since the first king of Dynasty XII (Amenemhet I) is clearly the offspring of an XIth Dynasty ruler. Manetho does not provide the names of the kings that constituted his Dynasty XI; he states only that the dynasty was composed of 16 kings of Thebes who reigned 43 years. The large number of kings in this brief period suggests that these were a group of local rulers which constituted the beginnings of the feudal system that characterizes Dynasty XII. This concept has not been seriously entertained by modern scholars. The supposition that these kings ruled in sequence has required recognition that either the number of kings in the dynasty must be reduced, or the period of the dynasty increased significantly, or both. Solutions in all three directions have been proposed. An increase in the period has been regarded as allowable, since one of the kings assigned to this dynasty reigned more than 43 years.[103] However, other evidence points to the necessity of reducing the period of the early dynasties rather than expanding it.

The kings that modern historians have assigned to this dynasty are, in part, of Heracleopolite origin, not of Theban origin as stated by Manetho.[103a] It was Manetho's Dynasties IX and X that had their origin at Heracleopolis,[103b] suggesting that at least some of these kings assigned to Dynasty XII actually belong to Dynasty IX or X. Confirmation of this situation is provided by the evidence that Dynasties IX and X reached to the very beginning of Dynasty XVIII. Obviously, it would be absurd to recognize this evidence for positioning Dynasties IX and X and at the same time maintain the concept of a sequence arrangement of Manetho's dynasties.

This distrubing evidence was omitted from the translation of Brugsch's work from French to German, an omission noted by the editor of the English translation. Believing that this evidence "should not be suppressed," he included a summary of this evidence as an appended note.[103c] By the proposed revision, Dynasties IX and X *do* belong to the Hyksos era, and there is no need to suppress these data. Further confirmation of this position of Dynasties IX and X in the Hyksos period *following* Dynasty XII may be seen in the evidence of a Hyksos origin of Khyan[103d] whose scarabs are nevertheless certainly of the era of Dynasty VI or IX. As will appear in subsequent sections, it is this same revision that brings order out of chaos on the problem of the placement of Dynasty XII in Early Bronze rather than in Middle Bronze, since now Dynasty XII precedes both the First and Second Intermediates as quite the same period.

While there are many other problems provided solutions by the revision, which have been noted in other chapters of this work, it is not feasible to extend this review. ***Those that have been noted provide adequate evidence that the chronology of Egypt is in need of gross alteration — an alteration that is rational only when the premise of a sequence for Manetho's dynasties is rejected and when dating methods used to arrive at current views are recognized as invalid.*** We turn then to a re-examination of the evidence from Byblos and Cyprus purported to confirm the position of Dynasty XII in Middle Bronze.

XV. *A Re-examination of the Evidence from Byblos Purporting to Position Dynasty XII in Middle Bronze*

While the relation between these numerous anachronisms and anomalies and the proper position to be assigned to Dynasty XII in the Archaeological Ages may not be readily apparent in all cases, these should be recognizable as providing evidence that Dynasty XII has been set too far back on the B.C. time scale. It follows from this that the starting premise of a sequence arrangement of Manetho's dynasties is invalid. The fact that these numerous difficulties are provided a virtually total solution by the proposed revision provides adequate basis for presuming that the evidence purported to thus fix the position of Dynasty XII has been misinterpreted. A re-examination of this evidence is thus in order.

The Archaeological Ages have been defined in terms of cultural changes that have been observed in Palestine, not in Egypt. These cultural changes are not, for the most part, reflected in the archaeology of Egypt.[104]

> Egypt throws scorn on these assumed periods. . . .

Hence, in the very nature of the case, it is not possible to place Dynasty XII, or any other dynasty of Egypt, in its proper position in the Archaeological Ages from evidence to be found in Egypt. This will be possible only by the indirect method of establishing this position by correlation of the archaeology of Egypt with that of Palestine or with that of an area that in turn can be correlated with that of Palestine. This *is* the manner in which such a placement is presumed to have been deduced. If this deduction is solid and unequivocal, then there is no further room for argument with current views. If the deduction can be shown to be subject to severe question, then there is no final proof for the current placement of Dynasty XII in Middle Bronze as has been done traditionally. Without such unequivocal evidence, the concept rests its full weight on the demands of the currently accepted chronology. Since it is this chronology that is here challenged, these demands cannot be used to meet this challenge. The larger probability is that the chronology is in error and that alterations of this structure which reject the sequence premise for Manetho's Dynasties are not "out of bounds" for serious consideration.

Ehrich candidly admits that the evidence on which this placement rests is not "highly satisfactory."[105]

> . . . The synchronization of the First Intermediate period with the Middle Bronze I of Syria and Palestine is not established by specific archaeological correlations. These periods fall into place opposite each other merely as the successors of the Old Kingdom and the Early Bronze period.

The sequence between the First Intermediate and Middle Bronze I, noted in the above quotation, is *not altered* by the proposed revison; hence, the evidence supporting the sequence does not favor the current view over the proposed revision. The contention here is that Middle Bronze I *also* follows Dynasty XII as a contemporary of Dynasty VI. Ehrich continues:[106]

> . . . Middle Kingdom materials [of Dynasty XII] do not provide any such direct and highly satisfactory Syro-Palestinian correlations as do the Old Kingdom finds. In fact, the synchronisms of the Twelfth Dynasty with the Middle Bronze IIA period must be substantiated by discoveries outside of Egypt, such as the Byblos tombs and the temple dated by the names of the Twelfth Dynasty Pharaohs Amenemhet III and IV and by the circumstance that the following Middle Bronze IIB period is again directly correlated with Egypt.

Here, then, is a candid admission that except as the evidence from Byblos is unequivocal, there is no final proof for the positioning of Dynasty XII in Middle Bronze IIA, since the correlation between Middle Bronze IIB with Egypt is also retained by the proposed revision.

That the dates assigned to the Archaeological Ages in Palestine for the era in question depend on the presumed fixity of dates in Egyptian chronology is beyond dispute. Albright freely admits this fact and notes further that the dates to be assigned to the era of Middle Bronze depend on certain finds at Byblos in Syria. The evidences referred to are defined as the discoveries of tombs numbered I and II at Byblos and discovered by Montet.[107]

> Since Egyptian chronology is now fixed [*sic*] within a decade or two for the entire period included in this chapter [dealing with correlation of the Archaeological Ages between Palestine and Egypt], our dates are approximately certain wherever we can establish a good correlation with Egyptian cultural history. Thanks to scarabs and inscriptional evidence, this is quite possible. For example, Tombs I and II of Byblos, discovered by Pierre Montet, were contemporary with Amenemmes III and IV, respectively, and must [*sic*] accordingly be dated towards the end of the nineteenth century B.C. The pottery which they contain is in general similar to (and often identical with) our Palestinian Middle Bronze IIA, though there are a few divergent forms.

Albright does not state the reasons why he regards this evidence from Byblos as providing a "good" correlation between Palestine and Egypt, and neither does Ehrich give his reasons for regarding this indirect evidence as something less than entirely satisfactory. Nevertheless, all of the evidence given in both cases may be questioned on salient grounds as not providing any final proof that Dynasty XII belongs to the era defined in Palestine as Middle Bronze. The unsatisfactory nature of this evidence as proof becomes apparent with the recognition that it may be interpreted in an even more credible manner by the altered chronology here defended. Not only so, this can be done by adhering more closely to the accepted rules of archaeological interpretation than does the popular interpretation.

It is somewhat surprising that a scholar as astute as Albright should appeal to the use of scarabs as a means of defending a chronology, particularly so when the point in question rests on such a precarious foundation otherwise. The sterile nature of such evidence has been repeatedly pointed out by various investigators.[108] The reasons are that scarabs may have been treasured as keepsakes long after the era represented by their origin, and because evidence is at hand to indicate that these were frequently reproduced by later generations. It is not at all apparent why this rule can be rationally disregarded here to provide a support for a concept that cannot stand on its own feet otherwise. An alternate and more credible explanation for the finds of these scarabs of Dynasty XII in Palestine associated with items belonging to Middle Bronze has been previously presented.[109] So also have been noted the anachronisms that result from the acceptance of this popular interpretation.

The remaining evidence to be dealt with is represented by the items found in Tombs I and II at Byblos and inscribed with the names of Amenemhet III and IV of *late* Dynasty XII, which tombs also contained pottery similar to, and often identical with pottery from Palestine belonging to Albright's Middle Bronze II (See note 109 for an alternate designation of this same period as Middle Bronze I). Does this evidence *prove* that Dynasty XII belongs to the period defined by Albright as Middle Bronze II? It is extremely doubtful if any scholar in the field would answer this question with an unqualified affirmative. It may be presumed that it is this situation that led Ehrich to refer to the evidence as other than "highly satisfactory."[110]

The reasons are obvious. *Items found in ancient tombs do not necessarily belong to the same era as that of the burial.* As with scarabs, these items may represent keepsakes treasured by the deceased during his lifetime. If one could be sure that the treasured items had an origin *during* the life span of the deceased, it would be possible to conclude that the items did not antedate the burial by more than a single life span. But more commonly than otherwise, this cannot be proved. In many known cases the items represent a collection from generations back in time. The presence of pottery like that of Middle Bronze II in Palestinian tombs permits the deduction as probable that the *burial* occurred in Middle Bronze II. But this does not prove that the items inscribed with the names of XIIth Dynasty kings belong to Middle Bronze II, and hence does not prove that Amenemhet III or IV ruled in that era.

The evidence of the "foundation jar" containing numerous small items of XIIth Dynasty origin, found *below* the pavement which separates the Middle Bronze temple at Byblos from the preceding period, is even more questionable in regard to providing evidence for a placement of Dynasty XII in Middle Bronze.[111] It is this temple to which Albright and Ehrich refer as datable to Dynasty XII on the basis of correlation with the tombs containing items inscribed with the names of XIIth Dynasty kings.[112] The pavement is separated from the ruins of the catastrophe at Byblos at the end of Early Bronze by a "fill" composed of soil which contained materials from elsewhere on the mound. The fill was evidently for the purpose of covering the ruins in preparation for the subsequent reconstruction. The jar of items rests in the ashes of the destruction. The small items it contained resembled others found in the fill *outside* the jar which were associated with items inscribed with XIIth Dynasty names. While an identification of a XIIth Dynasty origin of these items is admissiable, this does not prove that Dynasty XII belongs to the era represented by the temple construction above the pavement.

To allow such an interpretation as feasible, it has been hypothesized that this jar was placed under the pavement in the bed of ashes at the time the temple was constructed, perhaps as a "foundation offering." It is just as reasonable, if not more so, to recognize that these items were gathered from the ruins of the previous era. This concept is indicated by the unfinished nature of some of the items, suggesting that production was interrupted by the catastrophe at the end of Early Bronze.

In terms of the proposed revision, the only interim between the end of Early Bronze and the beginning of Middle Bronze in Palestine and Syrophoenicia is represented by the 40-year period between the Exodus and the Conquest, during which time the site of Byblos remained in ruins. The Hyksos period representing the Second Intermediate in Egypt (but which by the revision is the same as the First Intermediate) is not otherwise reflected archaeologically in this area. This is the period of Israelite occupation during the period of the Judges. The new occupants at Byblos in Middle Bronze are thus peoples who migrated into this area from Palestine or elsewhere at, or after, the conquest of Palestine under Joshua. There are no data from Byblos that do not fit satisfactorily into this altered interpretation.

XVI. A Re-examination of the Archaeological Evidence from Ugarit and from Cyprus

Certain finds at Ugarit (Ras Shamra) on the mainland, and on the island of Cyprus, opposite Ugarit and some 60 miles off the Mediterranean coast, have been interpreted as confirming the deductions derived from the finds at Byblos. A re-examination of this evidence confirms the alternate structure as defended in this work. The purported, but inadequate, confirmation again depends on the unproved assumption of a sequence arrangement of Manetho's dynasties. This material was summarized by Schaeffer in his 1948 production[113] and is briefly reviewed here. The definitions of the limits of the Archaeological Ages, as understood by Schaeffer, have required modification in the light of more recent studies, though scholars continue to differ in the use of the terms to be applied to the sub-periods of this critical era, thus introducing a degree of confusion. In the opinion of the writer, this confusion has been a major factor in the continued life of current concepts on "borrowed time."

In the course of early investigations at Ras Shamra, a type of characteristic red pottery was found in the form of milk bowls. On the basis of these early observations, this pottery was given a period of usage c. 3000-2000 B.C. In terms of Egyptian chronology, this period would begin at some indefinite point in the Old Kingdom prior to Dynasty VI and reach to the beginning of Dynasty XII, thus including what had been termed the First Intermediate. In the course of later investigations by Schaeffer and collaborators (1935f.), sherds of this pottery from the mainland were noted to be identical to examples of this same ceramic found in numerous tombs on the island of Cyprus. On the basis of these later investigations, Schaeffer felt compelled to reduce the period of usage of the pottery to the period c. 2600-2000 B.C., which period would be approximately that from the *beginning of Dynasty VI to the beginning of Dynasty XII*. Certain of his colleagues, however, were unwilling to accept this reduced period for the life of the pottery usage.

During the third campaign at Ras Shamra under Schaeffer, sherds of *vases* made of this same red ceramic were found in *stratified beds* assigned to Middle Bronze I (early Dynasty XII of Schaeffer) and reaching to the earliest phase of Middle Bronze II (late Dynasty XII of Schaeffer). On the basis of these finds, Schaeffer felt compelled to reduce his dates for the use of this pottery still further.[114]

> We have since ascertained that this reduction for the duration of use of the red pottery has surprised certain of our colleagues to the point of leading them to bypass in silence our thesis, while continuing to hold to other results of our Cypriot researches. We are obliged to return here to the question and regret having to aggravate the disagreement. In fact, from the new discoveries, we have since been convinced that the proposed reduction of 1936 was insufficient. [Translation.]

This time it was not only the beginning date that was lowered, but also the ending date. On the basis of the find of sherds in strata of Middle Bronze I (then fixed to the era of early Dynasty XII), the period of duration was reduced to c. 2300-1800 B.C., a period considered by Schaeffer as reaching from near the *end* of Dynsty VI to near the *end* of Dynasty XII. However, since the sherds of vases were found *only* in Middle Bronze strata, it was concluded that the importation of the vases to the mainland was limited to the shorter period c. 2100-1800 B.C., especially since no evidence had been found at Ras Shamra of sherds of these vases, the earlier examples having been milkbowls.

The evidence thus far noted provides no basis at all for recognizing any of this red lustrous pottery as belonging to the era of Dynasty XII; the deductions were based on their appearance in levels *assigned to Dynasty XII by current views*. An unequivocal proof of the use of this pottery in the era of dynasty XII and also its belonging to Middle Bronze would require the find of remnants of the pottery in Middle Bronze levels and associated with items that could be unequivocally dated to the era of Dynasty XII in the same stratum. No such evidence had been observed.

Evidence *was* at hand, from examination of tombs in Cyprus, indicating the use of this pottery in Dynasty XII, but since this evidence was from tombs and not from stratified layers, this evidence did not provide the proof that the tombs belonged to Middle Bronze. Usage of the pottery in the era of Dynasty XII was suggested by the presence in many of the tombs of a type of earthenware bead characteristic of beads found also in some tombs that clearly belonged to Early Bronze and were datable to the era prior to Dynasty XII in Egypt. It was thus necessary to conclude, without supporting evidence from Egypt, that this type bead had its origin in Dynasty XI, a conclusion of extremely doubtful nature, since virtually nothing is known of the culture of the era of Dynasty XI.

Certain of the tombs in Cyprus containing the red pottery were also found to contain a foreign pottery type regarded as of Aegean origin), similar to samples having been observed in Egyptian tombs carrying the cartouch of Amenemhet II (early Dynasty XII). However, since the same tomb contained also a vase of Cretan origin from the era of Early Minoan III (Early Bronze III), the evidence actually pointed to a position for Dynasty XII in Early Bronze, not in Middle Bronze.

The entire problem is clarified when it is recognized that Dynasty XII belongs to the era of Early Bronze, not Middle Bronze, and was roughly contemporary with Dynasty VI. The beads of XIIth Dynasty origin then do not require this questionable recognition of an origin prior to Dynasty XII. It is to be expected that the same pottery will be found under conditions suggesting an era in the Old Kingdom (Dynasty VI) and also under conditions suggesting the era of Dynasty XII, since both are the same period. As pointed out in Chapter VI, what is being called the First Intermediate (Early Bronze III of Schaeffer) may well represent the brief period between the Exodus (at the end of Dynasty VI) and the Conquest 40 years later. The appearance of sherds of the vases at Ras Shamra in strata of Middle Bronze like those from tombs containing beads of XIIth Dynasty origin are then simply samples of the pottery taken to the mainland in the course of migrations following the catastrophe to this entire area at the end of Dynasty VI.

Notes and References

(1) Vol. I, Chap. VI. (2) *Ibid.*, Chap. IX. (3) See A-RDBL, p. 6 for example; Vol. I, Chap. XIX. (4) *Ibid.*, Chap. V; Chap. VIII, quot. of ref. 8a; W-BA, pp. 18, 19, 25, 27. (5) Vol. I, Chap. XIX, par. 11. (6) Vol. I, Chap. V, quot. of ref. 4; K-AHL, p. 162. (7) W-DP, p. 75. See quot. of ref. 2 of Chap. V, Vol. I; see K-AHL, p. 134, see quote of ref. 17 of Chap. VI, Vol. I and W-BA, p. 83 for contrasting situation at the end of Early Bronze where the Conquest is placed by the proposed chronological revision. (8) See Josh. 11:23 for statement of the general completeness of the initial phase; see A-AP, p. 108 and W-BA, pp. 81, 82 on the archaeological data of Lachish attributed to the Conquest in terms of the XIXth Dynasty setting. By the XVIIth Dynasty setting, the discrepancy is still greater. Miss Kenyon seems reticent to accept some of these destructions as of Israelite origin (K-AHL, pp. 212f). (9) Vol. I, Chap. VIII. (10) See K-AHL, pp. 115, 134 for setting these two incidents in the same era, as indicated in Scripture (Josh. 7:2). (11) Vol. I, Chap. V, Sect. IV. (12) *Ibid.*, Sects. II, III; Chap. VI, Sects. VI-VIII, X. (13) *Ibid.*, Chap. V, quot. of ref. 30; BASOR, No. 198, p. 10. Some seem to be still grasping at straws in a belief that the site has been misidentified (personal communication). (14) Vol. I, Chap. IV, quots. of refs. 3, 42. (15) Num. 21:11ff. (16) Vol. I, Chap. IV, Sect. II. (17) Vol. I, Chap. III, Sect. III, par. 10. (18) Sect. XI of this chapter; par. 1 of Chap. XIII. (19) Ex. 1:11. (20) Vol. I, Chap. III, quot. of ref. 17. (21) Ex. 2:1-9. (22) Personal communication. For examples of supposed bases for such an explanation, see K-SAP, p. 8n; M-HE, Vol. IV, pp. 370, 370n. (23) See ref. 20; the temples, monuments, and inscriptions of these kings are uniformly farther south; B-HE, Chaps. XIV-XVII. (24) *Ibid.*, p. 282. (25) Vol. I, Chap. IV, Sect. III. (26) *Ibid.*, Sect. IV. (27) Vol. I, Chap. IV, Sects. VI-VIII. (28) *Ibid.*, quots. of refs. 30, 39. (29) *Ibid.*, Sect. VII. (30) *Ibid.*, Sect. IX. (31) K-AHL, p. 283; B-HE, p. 323; G-H, p. 33. (32) Gen. 46:34. (33) Gen. 47:17. (34) Vandier (V-FDEA) has collected these various references. (35) Vol. I, Chap. X, quots. of refs. 3, 5. (36) *Ibid.*, Sects. III, IV; see Fig. 9. (37) Vol. I, Chap. IV, Sect. II. (38) Sect. XI of this chapter. See also Chap. XIII. (39) Gen. 21:34; the Philistines are still there at the time of the Exodus (Ex. 13:17); see W-BA, p. 40 as an example of relegating such troublesome passages to the category of "polish" added in the course of oral transmission. (40) Chap. IX. (41) W-S, p. 102. (42) Jdg. 4:23, 24; 5:19; Chap. X (this volume). (43) *Ibid.*, quot. of ref. 13. (44) I Sam. 31:10. (45) Chap. XIII, Sect. VIII. (46) Vol. I, Chap. XVI; Sect. X of this chapter. (47) I Kings 12:25. (48) Chap. IX, quot. of ref. 52. (49) Chap. X, Sects. VI, VIII. (50) B-HE, p. 218. (51) *Ibid.* (52) P-HE, Vol. I, p. 119. (53) See ref. 50. (54) A-AP, p. 86. (55) K-AHL, p. 193. (56) *Ibid.*, p. 181. (57) *Ibid.*, p. 182. (58) P-HE, Vol. I, addenda, p. xxxiv. (59) W-BA, p. 58. (60) See ref. 58. (61) Vol. I, Chap. XIV, Sect. VI. (62) Sects. XV, XVI (this chapter). (63) See quot. of ref. 60; K-AHL, p. 136; A-AP, p. 94. (64) Ex. 12:36. (65) Vol. I, Chap. XIV, quot. of ref. 42. (66) See P-HE, Vol. I, addenda, p. xxxv where the name is given as Yaqab-el. (67) Vol. I, Chap. XIV, Sect. VI. (68) Vol. I, Chap. XVI, quot. of ref. 19. (69) *Ibid.*, quot. of ref. 29. (70) See ref. 68. (71) B-HE, Chap. XXV. (72) Cp. Vol. I, Chap. XVI, quot. of ref. 30 with Chap. XVIII, Sect. VIII. (73) P-HE, Vol. III, p. 299. (74) Vol. I, Chap. XVIII, Sect. VII. (75) II Chron. 14:1,9. (76) P-HE, Vol. III, pp. 242, 243. (77) II Chron. 12:1-4. (78) J-AJ, Bk. VIII, Chap. X, par. 2. (79) Vol. I, Chap. XVI, ref. 25. (80) A number of XVIIIth Dynasty kings have names in the Greek which have no resemblance to the Egyptian names. Pul of Scripture (II Kings 15:19; I Chron. 5:26) is the same king as Tiglathpileser of the Assyrian inscriptions. No kings of Egypt are known by the names Zerah (II Chron. 14:9) or So (II Kings 17:4); see Vol. I, Chap. XVI, Sect. VIII; Sects. XII, XIII of Chap. XVII for identifications of these kings by the revision. (81) Sect. VI (this chapter); see also Chap. XIII. (82) Chap. XVI, Sect. VI. (83) *Ibid.*, Sect. VIII; Vol. I, Chap. XVII, Sect. IV. (84) See Fig. 4. (85) Vol. I, Chap. XVII, Sect. IV. (86) Vol. I, Chap. V, Sect. VI, quot. of ref. 43. (87) At Beth Shan (F-ABH, p. 8), at Abu Hawam (K-AHL, p. 304; BASOR, No. 124, p. 21), at Gezer (K-AHL, p. 276), at Shechem (BA, Vol. XX, p. 97), at Alalakh (W-FK, pp. 166, 167), in Transjordan (G-OSJ, p. 21; BASOR, No. 68, p. 25), at Troy (B-TT, p. 32), at Megiddo (B-AB, p. 105), in Anatolia (L-EA, p. 13), at Alsihar (*Ibid.*, p. 192), at Hebron (BA, Vol. XXVIII, p. 32), in the Negeb (BASOR, No. 149, p. 10), at Tell Jemmeh (B-AB, p. 103), etc. (88) R-CH, Vol. I, p. 264. (89) P-HE, Vol. III, p. 160. (90) By the synchronism of the war of Rameses II with the Hittites in the reign of Muwatallis (C-SH, p. 260). (91) *Ibid.*; see quot. of ref. 43, Chap. V, Vol. I. (92) L-ARAB, Vol. I, pp. 200ff. provides translations of annals of Shalmaneser III which contain a number of such references. (93) *Ibid.*, par. 599. (94) C-SH, p. 259. (95) See ref. 86. (96) See ref. 87. (97) Vol. I, Chap. V, quot. of ref. 41. (98) Vol. I, Chap. VI, Sect. X. (99) Vol. I, Chap. XVII, Sect. XI. (100) As is apparent in the periods for the Egyptian dynasties as assigned by Manetho. A number of such time periods once interpreted as elapsed time have had to be abandoned. (101) Vol. I, Chap. XVI, Sect. XI. (102)

B-BK, Vol. 1, p. 106. (103) Antef IV is given a reign of c. 50 years (P-HE, Vol. 1, p. 134). (103a) W-M, p. 63. (103b) *Ibid.*, pp. 61, 63. (103c) B-EUP, Vol. 1, pp. 314, 315; Vol. I, Chap. XV, quots. of refs. 20, 22. (103d) Sect. IX, quot. of ref. 52 (this chapter). (104) B-EUP, Vol. I, p. 32. (105) E-COWA, p. 19. (106) *Ibid.* (107) A-AP, p. 84. (108) See Vol. I, Chap. XIV, Sect. X for quots. (109) *Ibid.* (109a) See K-AHL, p. 166n for statement of correlation. (110) See ref. 105. (111) S-SCCAO, Sects. 150ff., pp. 334ff. (114) *Ibid.*, Sect. 149, par. 5.

CHAPTER VI

NATURAL CATASTROPHE AND ARCHAEOLOGICAL SYNCHRONISM

From time immemorial, this planet has been the victim of disasters of more or less local nature from natural causes. Such incidents would have no value in archaeological interpretation or as a chronological reference except as ancient mention of them is extant as a basis for providing historical correlation. On the other hand, both archaeology and ancient written sources have revealed data indicating that the ancient world has at times been the victim of more widespread disasters from natural causes which must be placed in quite a different category from that of purely local concern. Principal among the natural causes of these more violent disasters are earthquakes and floods. These more general catastrophes have a far greater potential value in chronological studies, since their rarity and uniqueness provide a basis for more specific identification with an historical era. A number of such unusual disasters are in evidence in ancient historic times.

Scripture mentions one such as an earthquake that occurred in the reign of Uzziah (Azariah), king of Judah.[1] The fact that the incident was mentioned by a later Bible writer some three centuries after the incident, referring to it as "the earthquake,"[2] indicates that the incident was so unusual for the entire era that the populace at this later time was still familiar with the details.

Schaeffer has noted archaeological evidence of general destructions by earthquake which affected much of the area of Asia Minor, Syria, and Phoenicia, with evidences of destruction extending as far south as southern Palestine.[3] One of these was also of such unique nature as to lead Schaeffer to refer to it repeatedly as "the earthquake."

The island of Crete has been the victim of a series of disastrous earthquakes, one such being so violent as to destroy all but a remnant of the culture of the island, possibly due in part to subsequent tidal waves that swept over much of the island.[4] From this disaster, Crete did not recover for a multiplicity of centuries.

The archaeology of Greece has revealed a disaster that destroyed virtually all of the cities of this area.[5] Since this territory is known to have been the victim of repeated disasters from natural causes, assignment of the cause to a violent earthquake is a reasonable assumption. There are also references in the legendary sources of Greece to two violent floods that destroyed much of the territory. One of these was the flood of Deucalion's time, a flood so extensive in its results that Deucalion and his wife, according to the legend, thought themselves the sole survivors of the disaster.

In Egypt, ruins of numerous massive structures remain which show evidence of having been thrown down by an earthquake. Such an earthquake is presumed to have occurred in the reign of Akhnaton of Dynasty XVIII in the so-called Amarna Age.[6] There are, however, no known extant inscriptions that refer to any such catastrophe from natural causes during this reign. The destruction is attributed by some to vandalism, by others to an as yet unidentified cause.

The end of the Old Kingdom in Egypt was marked by violent destruction. This destruction is equated with the end of the Early Bronze Age which is marked archaeologically throughout Palestine and the territory to the north by extensive destruction of cities.[7] In this case the identification of the cause as of natural occurrence or at the hands of man is not always so clearly indicated, though the extensiveness of the destruction suggests a natural cause as the ultimate factor.

The question to be considered is whether more than one of these general disasters represent the results of a common cause which affected much larger areas than has been supposed. Could it be possible that such an actual coincidence has been obscured by a miscorrelation of the chronologies of different areas? According to the altered chronological structure introduced in this work, the chronology of Egypt *has been* miscorrelated with the history of Palestine by a discrepancy amounting to 600 years or more at the time of the Exodus.[8] The numerous problems provided solutions by a correction of this error leaves open the probability that other similar cases have occurred, resulting in obscuring the time relationships between these disasters.

If this has been the case, then it may be expected that when these miscorrelations have been corrected, some of these general catastrophes will be found to have been coincident. This circumstance will then provide still further confirmation of the general correctness of the revision. It is proposed to show in this chapter that when the chronologies of antiquity are adjusted to the evidences provided by this altered structure, most of the more violent catastrophes of antiquity will be found to belong to one or the other of two relatively narrow time periods, suggesting that there were two natural catastrophes or sequences of catastrophes of historical antiquity that stand out above all the others. We begin this task by noting the available data relative to the earthquake that occurred in the reign of Uzziah, king of Judah.

I. The Earthquake in the Reign of Uzziah

This earthquake is referred to by the prophet Amos who dates the incident two years after the beginning of his prophetic ministry.[9]

> The words of Amos, who was among the herdmen of Tekoa, which he saw concerning Israel in the days of Uzziah king of Judah, and in the days of Jeroboam the son of Joash king of Israel, two years before the earthquake.

According to Thiele's chronology,[10] Uzziah reigned from 790-739 B.C.; Jeroboam reigned from 793 to 753 B.C. Since both Uzziah and Jeroboam were reigning two years before the earthquake,[11] it follows that the incident belongs within the interval between 790 and 751 B.C.

The prophet Zechariah referred to this incident some three centuries later,[12] using language which indicates that the quake was still a matter of general knowledge among the populace after this extended period of time. The reference also provides a clue to the severity of the disaster.

> And ye shall flee to the valley of the mountains; for the valley of the mountains shall reach unto Azal: yea, ye shall flee, like as ye fled before the earthquake in the days of Uzziah king of Judah. . . .

Josephus associates the earthquake incident with the incidents recorded in II Chronicles 26:16 relative to Uzziah.[13]

> . . . In the mean time a great earthquake shook the ground, and a rent was made in the temple, and the bright rays of the sun shone

> through it, and fell upon the king's face, insomuch that the leprosy siezed upon him immediately. And before the city, at a place called Eroge, half the mountain broke off from the rest on the west and rolled itself four furlongs, and stood still at the east mountain till the roads, as well as the king's gardens, were spoiled by the obstruction.

At this time Uzziah was obliged to relegate his kingly powers to his son Jotham as his coregent since, as a leper, he was not permitted to mingle with other people.[14]

> And Uzziah the king was a leper unto the day of his death, and dwelt in a several house, being a leper; for he was cut off from the house of the Lord: and Jotham his son was over the king's house, judging the people of the land.

Since both Uzziah and Jeroboam were reigning two years before the earthquake and since the latest date for Jeroboam was 753 B.C., and since by Thiele's chronology based on independent evidence,[15] Jotham became coregent in 750 B.C., it follows that the earthquake occurred in the year 751-750 B.C.

According to Hebrew sources,[16] Isaiah began his ministry on the day following the earthquake. The contents of his message in the opening chapters of the book bearing his name should be read against this background, the results of the catastrophe being still fresh before the very eyes of the people to whom these words were first orally addressed. From these early chapters, the following statements are gleaned.[17]

> Your country is desolate, your cities are burned with fire. . . .
> For Jerusalem is ruined, and Judah is fallen. . . .
> . . . The hills did tremble, and their carcasses were torn in the midst of the streets.
> Except the Lord of hosts had left unto us a very small remnant, we should have been as Sodom, and we should have been like unto Gomorrah.

Evidently the disaster resulted in a heavy loss of both life and property in Jerusalem, and damage to the cities was experienced throughout the territory. The destructions referred to by Isaiah have been commonly attributed by commentators to invasions by the Assyrians on the basis of Isaiah 1:7 which, in the KJV, reads "your land, strangers devour it in your presence, and it is desolate, as overthrown by strangers." However, the marginal reading and the rendering in other versions do not support this rendering. There is no indication in the Assyrian inscriptions of inroads by Assyrian armies into southern Palestine prior to the third year of Tiglath-pileser (742 B.C.), eight years after the earthquake,[18] and there is certainly no basis for presuming such destruction at Jerusalem by the Assyrians even at this date as stated by Isaiah.

Clearly, the earthquake in the reign of Uzziah was not like the ordinary earthquake whose effects are limited in severity to a relatively small distance from its epicenter. By the revised chronology, the era of Uzziah belongs to the late Late Bronze period; a more exact position in terms of the archaeological ages is not feasible, due to the obscurity and possible overlapping of the end of Late Bronze as related to the beginning of Iron I.[19]

II. The Catastrophe on the Island of Crete in Late Late Bronze

An exceedingly severe catastrophe befell the island of Crete also in late Late Bronze.[20] Crete lies in the Mediterranean Sea about one hundred miles off the southern tip of Greece. The disaster was so sudden and so widespread over the island that gradual decadence into virtual oblivian followed gradually during the subsequent years. Hutchinson commented on the situation thus:[21]

> Minoan power terminated in a sudden and widespread but rather mysterious disaster. At Knosos Evans found abundant evidences of the destructions of the Palace of Minos by fire, and of its systematic looting, but very few human bones. If its inhabitants were not carried off wholesale into captivity, they must have had time to escape. Moreover the Minoan culture did not vanish overnight like the Minoan empire. After an interval refugees of the same race and religion apparently, and indeed with the same culture but on a much lower standard, began to squat and even build shrines in the ruins of the palaces and villas of the princes and nobles. It is possible that the upper classes were nearly wiped out by the great disaster, but it is clear that a large number of the common people must have survived.
>
> But what was the cause of this catastrophe, which was not confined to Knosos but seems to have been experienced all over the island? . . . Was it caused by a foreign invasion, by internal revolutions, or by natural causes such as earthquakes and floods (which curiously often cause fires as well)?

Following the above statements, Hutchinson discusses the various theories that have been proposed as the cause of the disaster. While some few scholars adhere to the concept of an invasion as the cause, it would seem that most are convinced that the destruction was caused by a violent earthquake probably followed by violent tidal waves engulfing much of the island. The palace section of the island (with its more well-to-do populace) was evidently first destroyed by the quake, the ruin having been completed by tidal waves which did not reach the higher levels where the less affluent population lived.

The incident was dated by Evans c. 1400-1375 B.C. on the basis of finds of painted pottery in the reconstruction period similar to pottery found in the ruins of the city of Akhetaton, capital of the heretic Akhnaton in Egypt.[22] This city is presumed to have been destroyed shortly after the death of Akhnaton.[23] By this assumption, the city had a total life of hardly more than a decade after the death of its founder. The period is that of the so-called Amarna Age. The currently accepted dates for Akhnaton are c. 1375-1358 B.C. (Breasted); by the revised chronology the corresponding dates are c. 857-840 B.C.[24] But the earthquake of Uzziah's reign was 751-750 B.C., a century later than this.[25] If the catastrophe is the same as that in the reign of Uzziah and of the same origin, then the dates must be the same. If this is the case, then there should be some simple explanation for the discrepancy of some 600 years. Five hundred years of this are accounted for by the revised chronology itself. There remains to be explained, or accounted for, the remaining discrepancy between the dates for the Amarna period by the revision and the date of the earthquake.

It is commonly stated that the site of Akhetaton was abandoned soon after the death of Akhnaton and was shortly thereafter destroyed. It is inferred from this assumption that the pottery found in the ruins of the city, which was similar to that in the recuperation period at Knosos, provides proof that the disaster to Crete belongs to the Amarna Period. Hutchinson continues:[26]

> A lucky chance enabled Evans to date this disaster with *considerable accuracy*. Painted pottery of the type found in the reoccupation period at Knosos was found in Egypt in the city of Akhetaten at Tell-el-Amarna founded by the heretic Pharaoh Akh-en-aten and abandoned after his death. Such pottery *must* [*sic*] therefore be dated between 1375 and 1350 B.C., and even though we now know that this pottery is a Mycenaean not Late Minoan fabric, this does not affect the chro-

> nology [*sic*], since the same Mycenaean pottery is found at Knosos in strata immediately on top of the debris from the great fire. [Emphasis ours.]

Such statements of abandonment of the site after the death of Akhnaton *can not* be taken to mean that evidence is at hand to indicate that the city was totally abandoned and destroyed at that time. Such a construction is incredible. When Akhnaton built this new city as his capital and location of his palace, he was followed there in residence by some 80,000 of his disciples solely from Thebes and evidently by an even larger number from other sites in Egypt.[27] The city must have been a very large one. The question is, why should this large number of people abandon the city as their residence simply because Akhenaton had died? The city was abandoned only in the sense that subsequent kings tended to move their capital back to Thebes, though evidently Sakere and Tutenkhamen as his successors continued to rule from this city for some time,[28] even though Tutenkhamen did not follow Akhenaton in his religious views. There is thus no reason to believe otherwise that than the populace at large remained there for an extended period of time before the site was completely abandoned. Budge gave the subsequent city a duration defined only as "less than a century."[29] But a century of later occupation is more than adequate to allow a date for the occurrence of this particular pottery type in the ruins of the city as late as 750 B.C. In the first place, the pottery found in the reoccupation period at Knosos was not of Egyptian origin; it was of Mycenaean origin[30] (from Greece), the Mycenaean period continuing to the Dorian invasion, popularly dated c. 1100 B.C., but c. 750 B.C. by the revision. The specimens found in Crete did not necessarily come from Egypt; more probable is the deduction that the specimens at both locations came directly from Greece. Actually, it cannot be established just when this particular type of Mycenaean pottery ceased to be produced in Greece, but irrespective of the date for cessation of production, individual specimens may have survived for an extended period before appearing at either location.

A primary factor that evidently stands in the way of recognition of the later date (c. 750 B.C.) for the Dorian Invasion and for this type of Mycenaean pottery is the dogged retention of this 300-year gap in the history of Greece, a gap for which there are no historic details to encompass the assumed hiatus. This interpretation necessitates separating the Dorian invasion from this catastrophe in Crete by this same 300 years, even when placed in the Amarna period. But the popular placement of the Dorian invasion c. 1100 B.C. is in difficulty from considerations quite independent of the dating of this catastrophe. While the date 1100 B.C. for the Dorian invasion is 250 years later than the catastrophe set in the Amarna age at c. 1350 B.C., even this late date does not provide the proper background for the incident. Homer (8th century) speaks of Dorians in Crete in connection with his descriptions relating to the era of the Trojan war (c. 1180 popularly; c. 788 by the revision) in language which agrees with the situation in the 8th century, but remains an unexplained anachronism against a 12th century background. Referring to the references in Homer, Hutchinson commented:[31]

> These lines might seem appropriate to the time when Homer wrote (? the eighth century B.C.), but look strange as a description of Crete before the Trojan war. Does Homer's description refer to Crete in the ninth and eighth centuries B.C., or were there really Dorians in Crete in 1200 B.C. or earlier? Strabo, in citing the passage from the *Odyssey* [of Homer], also quotes a note on it by the historian Staphylos, who stated that the Dorians were in the east [of Crete], . . . while the remainder (the Achaeans and Pelasgians) . . . held the plains.

When it is understood that both Homer and the Dorian invasion, as well as the Trojan war and this late catastrophe to Crete, all belong to the 8th century, these and numerous other difficulties are provided a simple solution. The appearance of Dorians in Crete a few decades before the Dorian invasion is not improbable, since there were undoubtedly migrations occurring at this time on a lesser scale. The difficulty lies in having to account for their presence there two centuries or more before the invasion and against a totally anomalous background.

That the earthquake occurred during the period of Homer is suggested by the lines quoted by Evans.[32]

> Evans aptly quoted a line of Homer to the effect that "the Earthshaker delighteth in bulls" and suggested that the Minoan king had decided that this area should not be rebuilt but remain sacred to the "earthshaker" and had sacrificed bulls there to Poseidon the god of earthquakes, or to whatever Minoan god was the equivalent of Poseidon.

III. The Catastrophe in Late Late Bronze in Syrophonicia and Asia Minor

Schaeffer has noted evidences of widespread destruction by earthquake throughout the area of Syria, Phoenicia, and Asia Minor in late Late Bronze.[33] Again the catastrophe was sufficiently unique in its general nature to permit reference to it by Schaeffer as "the earthquake."[34] The date assigned is c. 1365 B.C., a date so close to that assigned to the catastrophe in Crete as to warrant consideration of a possible identical origin. Strangely, while quoting from the *Amarna Letters* in support of this dating, Schaeffer evidently did not agree with other scholars who assign the difficulties described in the letters to political causes and not to earthquakes. Schaeffer wrote:[35]

> "Ugarit, the city of the king, has been destroyed by the fire; the half of the city has been burned, the other half is no longer there." Such is the message of Abimilki, king of Tyre to Amenophis IV referring to the catastrophe which had ravaged Ugarit at a date between 1370 and 1360 before our era, a date which, for convenience we have fixed about 1365. Our observations made of the ruins of level I, (2 of Ras Shamra or Late Ugarit, 1450-1365) have confirmed that the city was partially destroyed by a disastrous earthquake accompanied perhaps by one of those violent tidal waves so feared on the Syrian coast and from which the port in particular had suffered damage. [Translation.]

That the difficulties at Ugarit in the Amarna period were of political origin is beyond question.[36] That the destruction observed by Schaeffer at Ugarit was the result of an earthquake can hardly be contested, since the destruction by the same obvious origin appears at a number of other sites in the area investigated.[37]

> Our investigation has permitted us to establish that on the occasion of this quake, other urban centers in Syria and in Palestine had undergone damage to the same extent (Atchana, Beit Mirsim, Jericho, Megiddo, Bethshemish, Abu Huwam, Lachish, Beth Shan, el Hessi, Taanak and Askalon). The catastrophe had struck also the villages on the coast of Asia Minor such as Tarsus. Troy had been equally shaken in the mid XIVth century [*sic*], also Boghaskeuy in the interior of the area. [Translation.]

The difficulty that gives rise to the difference of opinion lies in the fact that here, as in Crete, the time is not that of the Amarna period, but belongs rather to an era about one century later. The widespread area of the catastrophe, then, ties it to that in Palestine and in Crete at a date which we have assigned to the 8th century.[37a] The developing picture, when brought into focus, thus reveals a single ultra-violent catastrophe, which, in its tremendous proportions, ravaged the territory from southern Palestine to the far western reaches of Asia Minor, including even the island of Crete.

IV. The Catastrophe in Late Late Bronze in Greece

It is quite inconceivable that a catastrophe of these dimensions was not also disastrous to the territory of Greece. And Greece did not escape. The fact of this catastrophe in Greece is obscured by the near-coincidental invasion of southern Greece by the Dorians, to whom the destruction is generally attributed. With a better focusing of the picture to clarify the details, it is far more probable that it was not the Dorians who destroyed in virtual totality the cities of Greece. The Dorians only took advantage of the destruction and the prostrated condition of the country as the point of their invasion. This explains why the invasion could be so sudden and so completely successful, and it explains why the immediate subsequent period is so devoid of historical evidence.[38-43]

> . . . With the Mycenaean civilization we were almost on the threshold of historical times, yet now we are plunged into a proto-historic epoch which seems almost a complete blank. To describe it as the "Homeric period" is absurd; Homer's world corresponds either to the Mycenaean or to the Archaic period, surely not to the interval between them. To describe it as the Geometric period is more correct, but tantamount to confessing that our knowledge of it remains purely archaeological.
>
> The Aeolian and Ionian Migrations were, strictly, movements extending over a long period of time. The Dorian Invasion, however, was another matter. It was abrupt and especially violent, and affected most of Greece.
>
> . . . In the other direction, these genealogies peter out two generations after the Trojan War, which would bring us to the traditional date of the Dorian invasion, about 1100, at which time (as excavation has shown) all existing cities on the mainland were destroyed.
>
> Let us now turn to the archaeological evidence. This tells us the same story everywhere, a story of widespread destruction. Mycenae and Tiryns, whose fabulous wealth made them the chief targets of the barbarians, [*sic*] were so completely devasted that the sites were only sparsely re-occupied, the palaces never rebuilt.
>
> Asia Minor, however, shared the same fate of Mycenaean Greece. . . . Cyprus and Ras Shamra were ravaged at the same

> time. . . . Ras Shamra never recovered. Sites in almost every part of Syria and Palestine were devastated, but most survived after a fashion. . . . Other conquerors, the Dorians, came down from north-central Greece, this time not as successful adventurers siezing or harrying small kingdoms, but a destroying flood of men, making a sudden end of a long civilization, and beginning a Dark Age, three centuries of chaos, after which Classical Greece begins to emerge.

The assignment of this destruction to the Dorians leaves to be explained why the Dorians should so thoroughly destroy the cities of Greece in total, which area was to be that of their own later habitation. How much more logical the attribution of this total destruction as part of the same catastrophe that wreaked havoc from Palestine to Crete in the same era?

V. *The Catastrophe in Egypt*

While an earthquake has been dated in Egypt during the reign of Akhnaton of the Amarna Age, this deduction does not rest on any direct evidence but is rather by association of the disaster in Crete with the reign of Akhnaton on the basis of the similar Mycenaean pottery in the reoccupation period as that found in the ruins of the city of Akhetaton.[44] Our date for this catastrophe falls in the mid-reign of Rameses II, a century later. While there are no known references to this catastrophe to Egypt at this time, the background is that expected to characterize such a disaster. By the revised chronology, the catastrophe occurred in about the 42nd year of this reign. Rameses II left no significant inscriptions after this date.[45] The era is one of deterioration in Egypt and was characterized by the movement of foreign peoples onto Egyptian soil without significant moves to prevent it; this is the era described in the Harris Papyrus as one of chaos and anarchy.[46] It is possible that a more specific setting of this earthquake in the history of Egypt might be obtainable by noting the latest inscriptions on ruins of the earthquake. It is highly improbable that kings would make inscriptions on the ruins of temples.

VI. *What was the Cause of This Widespread Catastrophe?*

In attempting to deal with these evidences of catastrophe as separate and unrelated incidents widely separated in time, it has not been possible to recognize the magnitude of the disaster or to reach agreement on the problem of the probable causes. When it is apparent that the destructions reached from Egypt through Palestine, Syria, Phoenicia, Asia Minor, Greece, and Crete, the deduction that becomes clearly apparent is that a cause must be sought with a sufficient potential for producing destruction over such an extended area. Certainly this was no ordinary earthquake. The single factor clearly recognizable as having such potential for destruction was the eruption of the volcano on the island of Thera, just off the coast from the southern tip of Greece. In fact, this cause has been entertained as one of several possibilities for the origin of the catastrophe that befell Crete,[47] though there seems to have been no recognition that this same cause should be attributed to the destructions throughout Asia Minor, Syrophoenicia, and Palestine as coincident phenomena.

The magnitude of the eruption on Thera is almost beyond comprehension. The crater left from the eruption has an area of 83 square kilometers (30 square miles) and the eruption left a hole some 2000 feet deep.[48] The next most violent eruption, based on the size of the crater, was that at Krakatoa in 1884 which left a crater about 8 square miles by comparison. This latter quake produced tidal waves nearly 100 feet high and produced a known loss of life of some 36,000 people. Thera remains buried under volcanic ash to a depth of over 90 feet in places. There is evidence to indicate that at that time, much that was previously land area sank beneath the ocean, either from the violence of the eruption or from the sheer weight of the volcanic residues that fell following the eruption. Certainly this eruption was adequate to have produced this widespread disaster by virtue of the quake itself and by the resulting tidal action that must have followed.

Velikovsky attempted to link certain of these early disasters with astronomic causes.[49] That such may have been an ultimate factor is not necessarily to be eliminated by a recognition of the eruption of Thera as the immediate cause. The flood of Deucalion, occurring about two centuries earlier, may well have been the result of an earlier and less extensive eruption of the same or of another volcano whose crater now lies below sea level. This flood is said to have occurred in the reign of Thutmose III (950-896 B.C. by the revision).

VII. Catastrophe in the General Era of Late Early Bronze

Schaeffer has reviewed the evidences of two widespread catastrophes that occurred in the Near East during the era of late Early Bronze and the period following.[50] The first of these he dated in the era 2400-2300; the second in the era 2100-2000 B.C. Since the dates of Schaeffer were intended to be only approximate, we take these as c. 2350 and 2050 B.C. respectively. Since his dates relative to the archaeological ages are not altogether in agreement with those given by other investigators, it is more feasible here to deal with these two catastrophes in their relation to each other, and in relation to the fall of the Old Kingdom in Egypt, dated approximately to the end of Dynasty VI. This point is commonly equated with the end of Early Bronze III, though Schaeffer has it set at the end of Early Bronze II.[51] The problem is thus complicated by this and further variation in designations for the sub-periods that follow.

The archaeological ages were originally defined in terms of Palestinian archaeology, not in terms of Egyptian history. An awkward situation thus rises from attempts to correlate the chronologies of eras outside Palestine with Palestinian history by this system. Two additional factors enter into the problem. The actual point of the end of Dynasty VI in Egypt is obscure. While some would end it with the end of the reign of Pepi II, the reigns of several additional kings are recognized by others. There is also the unproved assumption that the fall of the Old Kingdom had the same cause as the numerous evidences of destruction and unrest to be observed in this same general era in western Asia from Anatolia to southern Palestine.

If the perturbations noted by Schaeffer are translated to incidents of Israelite history in terms of the altered chronology, it is then possible to define these dates in a relatively exact manner. We tentatively accept as a close approximation the coincidence of the earliest of these two perturbations with the end of Dynasty VI in Egypt. But the date is c. 1445 B.C., not 2350 B.C. This correlation is allowable in terms of the chronological revision by virtue of recognizing that the so-called First Intermediate that follows the end of

Early Bronze has quite the same beginning as the Second Intermediate, both representing the point of the Hyksos invasion and both representing the point of the Exodus in Israelite history.[51a]

The second of these perturbations, by this same thesis, belongs to the era of the conquest of Palestine under Joshua. The date is thus c. 1400 B.C. and not 2050 B.C., and the interval between the two is not 200-400 years, as assumed by Schaeffer, but only 40 years. The second perturbation thus does not mark the end of either the First or Second Intermediate.[52] This period of Hyksos control of Egypt continues on for another three centuries. It is this unrecognized circumstance that is apparently at the root of the confusion that results from attempts to define the subperiods of the era in terms of the archaeological ages, and at the same time correlate these periods with Egyptian history. The confusion as to the point where Dynasty XII belongs in the scheme is also related to this problem.[53] The generally accepted date for the beginning of Dynasty XII is c. 2000 B.C. However, one notes an extreme reticence among scholars to provide a point in the scheme of the archaeological ages for the beginning of this dynasty. Albright has dated *late* Dynasty XII in the roughly defined period 19th-18th centuries, but has elected to designate the preceding period, where one would expect to locate the beginning of Dynasty XII, as a "composite" stratum, which does not distinguish clearly between Middle Bronze I and the preceding period.[54] Miss Kenyon would end Early Bronze at the end of Dynasty VI and define Early Bronze-Middle Bronze Intermediate as approximately coincident with the First Intermediate,[55] which would then begin Dynasty XII about at the beginning of Middle Bronze I. Schaeffer would begin his Middle Bronze c. 2100, thus making the first century of Middle Bronze fall in the First Intermediate, the latter part extending into the era of Dynasty XII.[56] Miss Kenyon would begin Middle Bronze I not earlier than 2000, less definitely at 1900 ± 50 years.[57]

The aim of the following sections is to present an altered interpretation of the evidences reviewed by Schaeffer for the era under consideration. This interpretation will be set against the altered background of the proposed revision. In so doing, a number of significant details are noted to confirm the altered interpretation.

VIII. The Specific Catastrophe at the End of Schaeffer's Early Bronze II

At a time which cannot be far removed from the end of Dynasty VI, western Asia experienced a "perturbation," the effects of which reached from Troy in western Anatolia through the intervening territory to such distant areas as Egypt and Persia.[58] While the territory of Greece was undoubtedly also affected, the civilization of this earlier era has been so thoroughly destroyed by subsequent disasters as to make impossible any assignment of particular observations to any specific destruction.

The problem of the cause of this catastrophe would naturally become a topic of discussion among the investigators. Evidences of earthquake at Troy, at Tarsus, and at a few other sites are clear enough. However, the perturbation is usually reflected at more distant sites by evidence of conflagration, or by evidence of occupation of sites by a new people, or by abandonment of old sites or the founding of new ones.[59] Yet it is apparent that earthquakes can cause conflagrations, and structures not solidly constructed could be shaken down and burned without apparent evidence of earthquake otherwise.

The concept was entertained seriously by the investigators, and by Schaeffer, that the ultimate cause was an earthquake of unusual violence or a series of such earthquakes, followed by extensive migrations of peoples from north to south.[60] Evidences of such migrations were everywhere apparent. That such tend to occur following natural catastrophe is a well-observed fact. That the destruction was sudden and complete in west Anatolia is indicated by the fact that the previous occupants were either totally destroyed, or those that escaped left the area under circumstances that did not permit them taking even their treasured belongings. As a result, the newcomers were able to take over the wealth of the former occupants, and the following period in this area was characterized as one of a high level of wealth and prosperity. As Schaeffer has put it, they were able to turn the catastrophe to their own profit.

But this was not the case in the area farther east. Here the reoccupation period is represented by a meager population compared to the former, a population with a notably lower level of culture and prosperity. In many cases, they elected to establish new sites rather than clear away the worthless debris from the destroyed sites. We quote briefly (in translation) from Schaeffer.[61]

> What was the nature of the event or the events which caused these severe destructions in several of the principal cities of Anatolia such as Troy, Alaca, Tarsus, Alishar, as well as in Syria, such as Ras Shamra Ugarit, Qalaat-er-Rouse, Byblos, Chagar Bazar, Tell Brak, Tepe Gawar and in many of the cities of Palestine; the events which were responsible also for the fall of the Ancient Empire in Egypt, of destructions in Cyprus, in Mesopotamia, of the events which have finally had repercussions even in Persia and in the countries of the Caucasus? As for the magnitude of the catastrophe, it could not have been inferior to that which brought an end, about 1200, to the civilization of Late Bronze in all the areas of West Asia and beyond, and of which the invasions of the Peoples of the North and of the Sea were probably but one episode amplified by the information at which we have arrived principally from Egyptian sources.
>
> . . . It seems also that this element [new comers at Ugarit] was numerically of little importance and that the occupation of the site after the fire was less dense than that before the catastrophe. Some analogous observations have been reported from Qalaat-er-Rouss, from Hama, and from Chagar Bazar in Syria, from Beit Mirsim, from Jericho and from Gaza in Palestine.
>
> . . . .
>
> It is probable that natural causes have contributed and even released this pressure from the north to the south. The observations of Schliemann at Troy and those of the Turkish Mission at Alaca Huyuk, make necessary the conclusion that disastrous earthquakes had at that time shaken vast regions of Anatolia.

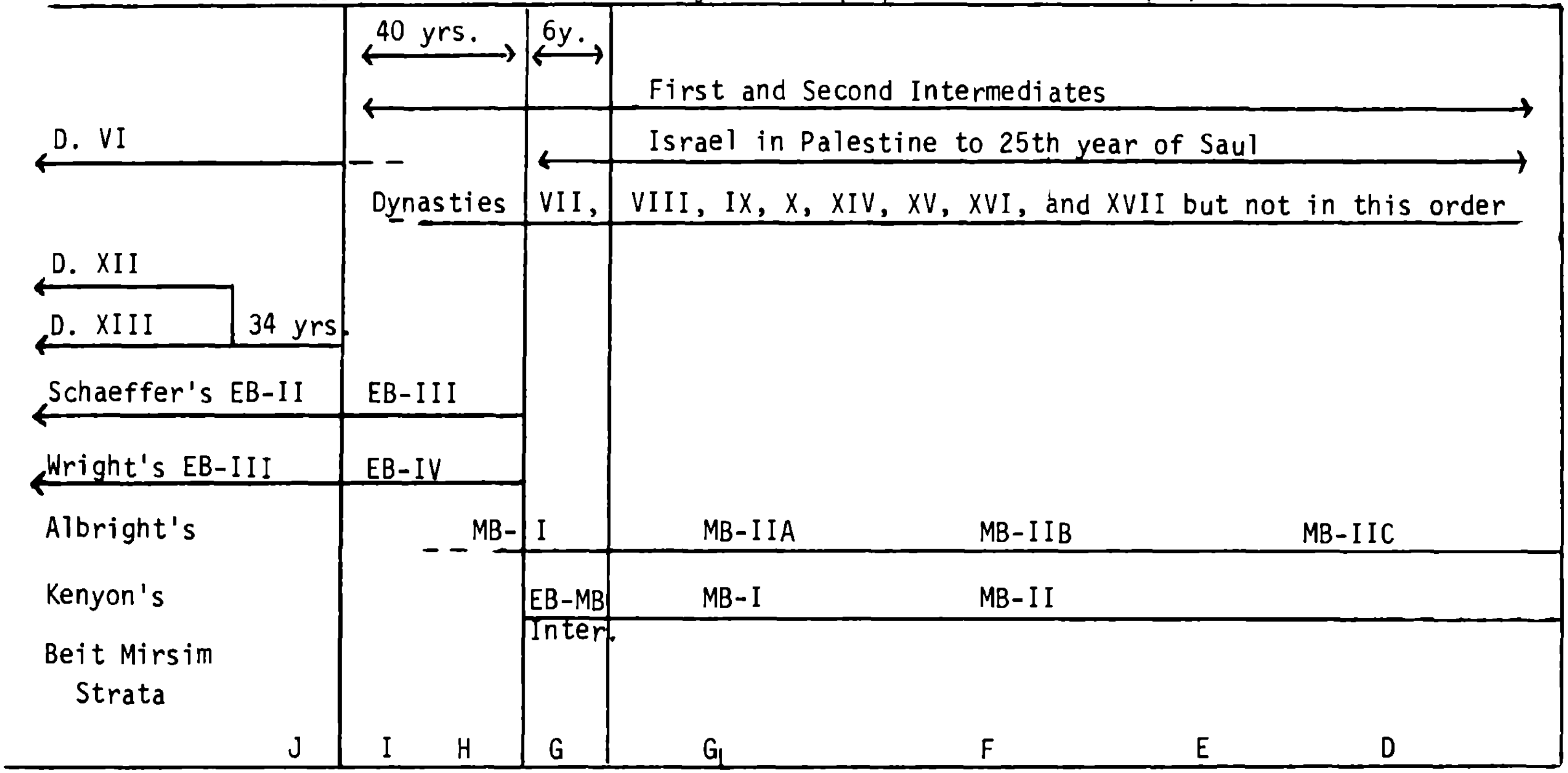
When these observations are equated with the incident of the Exodus and associated events as described in Scripture, and dated by the revision at the time assigned to this catastrophe, the picutre comes into clearer focus. From the Scriptural account we may deduce that the catastrophe which came upon Egypt at this time and which led to the plagues and to the subsequent developments was indeed a dire catastrophe associated with phenomena that were altogeher different from anything Egypt had ever experienced previously. While there were earthquakes involved[62] which continued over an extended period of time,[63] this catastrophe was more than, and different from, an earthquake of even vast proportions. The accompanying phenomena included severe hail storms mingled with fire,[64] which may account for the widespread evidences of conflagration over vast areas outside Egypt.[65] There were prolonged thunderings and lightnings of a most frightening nature with terrific rain storms and thick clouds and unusual darkness.[66] The bed of the River Nile became dry,[67] as if some catastrophe farther south had temporarily shunted the waters into a different channel. The disaster was accompanied by extensive loss of life to humans and to cattle.[68] There is no necessity for concluding that these phenomena were limited to the area of Egypt, and the extension of the same calamity to widespread regions which archaeologically reveal the effects provides a basis for at least hypothesizing the nature of the cause.

Velikovsky has attempted to associate some of these early catastrophes to causes of astronomical origin. While our information does not permit us to be specific in the assignments, an astronomical cause would seem to be the most reasonable cause for explaining the unusual manifestations.

If the Israelites had migrated directly into Palestine, as planned, they no doubt would have found the occupation of the territory a relatively simple problem, just as did the migrants from the north. As it was, 40 years elapsed between the Exodus and the eventual occupation. This 40 years gave opportunity for the new inhabitants to rebuild their cities after a fashion, and establish themselves more firmly in their new home, thus requiring a more difficult conquest of the territory. Just how much of the destruction observed in Palestine resulted from the siege of cities by the armies of Israel and how much may have been the result of the earthquakes cannot be determined except for the specific cases noted in Scripture, i.e., at Jericho.

A point of passing interest is to be seen in the prophetic words relative to the eventual occupation of this territory by the descendants of Abraham as compared to the actual situation as it existed at the time of the Conquest. At the time of the promise, the entire territory was evidently occupied by the Amorites.[70] At the time of the Conquest, there are a number of peoples occupying the territory.[71] We may look then to the migrations that took place 40 years earlier for the change in the occupants. That these various peoples

Figure 2. Showing the Manner in Which the Varient Definitions of the Archaeological Subdivisions are Related to the Altered Chronological Structure for the Period from Late Early Bronze (EB) to Late Bronze (LB) I



may have been more or less related is suggested by their origin in a common territory to the north. When these peoples were driven out of the territory at the time of the Conquest, moving northward, they were but returning to the general area from which they came.

IX. Problems Related to the Intermediate Periods

In previous phases of the developing concepts relative to the proposed chronological revision, a necessary premise has been that the so-called First and Second Intermediates in Egypt represent the same time period, both encompassing the era of Hyksos domination of Egypt. During this time, Palestine was not occupied by the Hyksos as currently believed; it was occupied by the Israelites. The question that naturally arises is, how can these intermediates represent the period of Hyksos occupation of Egypt lasting some four centuries by the revision, if the intermediate period between the two catastrophes and following the end of Dynasty VI was only 40 years? This is a reasonable question and deserves a credible and clear-cut answer.

We are dealing here with several periods that have been referred to as "intermediate periods." But at no time have we taken the position that all of these are exact equivalents. Some of these, the writer has introduced; others have been introduced by scholarly opinions, and unfortunately, scholars have not agreed among themselves on the definition of these periods. It is thus not only a question of clarifying the relationships between these periods, but also one of equating, as best can be done, the variant terms used to refer to the same or approximately the same period. And finally, each of these must be related to the scheme of the Archaeological Ages. The interrelations as viewed by the writer are shown in Figure 2.

X. The Catastrophe Dated by Schaeffer c. 2050 B.C.

The disaster dated by Schaeffer c. 2050 B.C. involved somewhat the same territory as that involved in the first perturbation. The date by the revision is c. 1405 B.C. and represents incidents related to the conquest of Palestine under Joshua. The date is 40 years after the Exodus and some 74 years after the end of Dynasty XII, since Dynasty XII by this altered structure ended 34 years before the Exodus. The more sparce population that migrated into Palestine following the earlier disaster had had sufficient time during the interim to rebuild their cities after a fashion, and to establish themselves in the new territory.

The archaeology of Beit Mirsim and certain other sites reflect this dual catastrophe clearly with its variant shifts in culture.[72] Stratum J at Beit Mirsim belongs to Early Bronze and represents the sparce occupation prior to the first catastrophe. Strata I and H above this are separated from J by a layer of ashes representing the catastrophe at the time of the Exodus. Stratum G is in turn separated from H by another layer of ashes representing the conquest of the site by Joshua, or by the effects of the earthquake of the second perturbation. That the occupants consisted partly of survivors from the catastrophe and partly of the new migrants is indicated by the mixed pottery of this period. Stratum G is then Israelite. This stratum was divided by the investigators into two sub-periods of which the later one had by far the longer duration. G2 may then be taken to represent a temporary occupation of the site by the armies of Joshua during the Conquest as well as representing the corresponding period at Jericho designated as Early Bronze-Middle Bronze Intermediate by Kenyon and others.

This deduction is confirmed to a degree by the observation of pottery in G2 like that in Early Bronze-Middle Bronze Transition at Jericho. An indirect correlation through the finds in the lower phase of Middle Bronze by Ory, at a site probably to be identified as Biblical Aphek, may also be recognized.[73] In the corresponding stratum containing the same characteristic pottery was found a scarab identified as of Dynasty XIII. By the altered structure, the Exodus occurred at a time when the rule of Egypt had been transferred to one of the more powerful feudal lords of Dynasty XIII, when there was no available heir to the throne in Dynasty XII. Hence, the point in question *does* belong to the era of Dynasty XII.

The ultimate cause of the second disaster, at least in the area of Anatolia, was again an earthquake or series of earthquakes. The disaster is indicated at Tarsus by walls tilted to a 45 degree angle, revealing the violence of the quake. Evidences of the quake are indicated over much of the area of Anatolia. At the time of this disaster, the wealthy and prosperous occupants from the time of the preceding disaster now disappear. Schaeffer commented:[74]

> These observations are corroborated by the facts in the corresponding levels at Tarsus. In level III . . . the beds comprising the ruins of buildings of which the walls are in part cracked and inclined up to 45 degrees from the vertical.
>
> Illustrated by the abundance and the richness of the movable items of the royal tombs, the brilliant civilization at Alaca Huyuk becomes somber in a sudden catastrophe. According to the observations of the Turkish investigators, the cause was a new earthquake or a series of seismic shocks of particular violence. Even the subterranean caves have been damaged. [Translation.]

Notes and References

(1) See quots. of refs. 8, 11, 13. (2) See quot. of ref. 12. (3) This voluminous material has been summarized by Schaeffer in S-SCCAO, Sects. 224-6, pp. 534-543. (4) H-PC, pp. 300ff. (5) K-G, p. 18. (6) See Sect. V. (7) B-HE, p. 147; see Sect. VIII. (8) See Fig. 2, Vol. I. (9) Amos 1:1 (10) T-MNHK, p. 187. (11) See ref. 9. (12) Zech. 14:5. (13) J-AJ, Bk. IX, Chap. X. par. 4. (14) II Chron. 26:21. (15) T-MNHK, Chap. 6. (16) Seder Odam 20, cited in V-WC, p. 212n. (17) Isa. 1:7; 3:8; 5:25; 1:9. (18) L-ARAB, Vol. I, pars. 761, 769, 770. (19) The delineation between Late Bronze and Iron I is given variant dates, depending on the area in question. See A-AP, p. 110 for statement of the gradual beginnings of this era. (20) This is the catastrophe of ref. 4. (21) H-PC, p. 300. (22) *Ibid.* (23) *Ibid.*; B-N, p. 557; W-SHAE, p. 159. (24) Vol. I, Fig. 11. (25) See text of ref. 15. (26) H-PC, p. 300. (27) W-SHAE, p. 149. (28) B-HE, p. 392. (29) B-N, p. 557. (30) H-PC, p. 300. (31) *Ibid.*, p. 318. (32) *Ibid.*, p. 198. (33) See ref. 3. (34) S-SCCAO, pp. 72, 129, 164, etc. (35) *Ibid.*, p. 560. (36) One has only to scan these letters to be aware of this fact. (37) See ref. 35. (37a) See Sect. II (this chapter). (38) D-BGA, p. 281. (39) B-HH, p. 30. (40) K-G, p. 18. (41) D-BGA, p. 283. (42) *Ibid.*, p. 284. (43) K-G, p. 24. (44) See ref. 30. (45) P-HE, Vol. III, pp. 39, 72. (46) Vol. I, Chap. XVIII, quots. of refs. 8, 9. (47) H-PC, p. 301. (48) *Ibid.*, p. 302. (49) V-WC. (50) See ref. 3. (51) *Ibid.*, Tables, pp. 39, 72. etc. (51a) See Fig. 2 of Vol. I; Fig. 2, this volume. (52) See ref. 51a. (53) This problem has been considered in detail in Chapter V where its position in late Early Bronze is defended. (54) A-AP, p. 84. (55) K-AHL, p. 136. (56) See Fig. 2. (57) p. 169, though on p. 170 the later date, 1850, is taken. This is some 60 years before the end of Dynasty XII, and it is admitted that there is no basis for the establishment of more exact dates. (58) See quot. of ref. 61. (59) *Ibid.* (60) *Ibid.* (61) S-SCCAO, pp. 535-537. (62) Ps. 18:11-15; 77:16-20. (63) See Vol. I, Chap. IX, quot. of ref. 26. (64) Ps. 18:12, 13. (65) See quot. of ref. 59. (66) Ps. 18:7, 9, 11. (67) Vol. I, Chap. IX, quot. of ref. 29. (68) We can only assume the degree of damage of life and property from the earlier plagues; the account of the 10th plague is more specific. See quot. of ref. 27, Chap. IX, Vol. I. (69) V-AC. (70) Gen. 15:16. (71) Deut. 7:1. (72) ASOR Annual, Vol. XVII, Chaps. II, III; see Fig. 2. (73) *Ibid.* (74) S-CCAO, p. 540.

CHAPTER VII

ARCHAEOLOGICAL EVIDENCES OF THE DISPERSION FROM BABEL

The only incidents mentioned in Scripture for the period between the Flood and the migration of Abraham into Canaan are related to the Dispersion from Babel coincident with the confusion of tongues.[1] These accounts are commonly scouted by scholars as presenting only a later adaptation of a supposedly earlier legendary account of Babylonian origin. A translation of the Babylonian inscription in question is provided by Sayce and reads in part:[2]

> ". . . Babylon corruptly to sin went and small and great mingled on the mound . . . Their (work) all day they founded, to their stronghold in the night entirely an end he made. In his anger also the secret counsel he poured out to scatter (abroad) his face he set, he gave a command to make strange their speech. . . . Violently they wept for Babylon. . . very much they wept."

In the process of developing the revised chronology of Egypt prior to the XVIIIth Dynasty, the details of which have been provided in an earlier volume, it was possible to identify clearly (1) the point of the Exodus in the reign of Koncharis of Dynasty XIII and coincident with the Hyksos invasion,[3] (2) the period of Israelite oppression under the reigns of Sesostris III and Amenemhet III of Dynasty XII,[4] and (3) the famine of Joseph in the reign of Sesostris I[5] in the same dynasty. For the development of the chronology of the period prior to the XIIth Dynasty, it was necessary to depend almost entirely on the Egyptian inscriptions,[6] since there are no events recorded in Scripture for the period between the Dispersion and the Famine which could be expected to be clearly confirmed archaeologically. It was shown, however, that when the information gleaned from the Egyptian inscriptions, beginning with Mena, is recognized as having a chronological value, we are led to a structure which is not at significant odds with a strict interpretation of the Scriptural figures.

The concept was current among the ancients that Mena, the first king of Egypt, was none other than Mizraim of the Genesis record, who migrated into the Nile Valley at the time of the Dispersion.[8]

> ". . . Mestraim was indeed the founder of the Egyptian race; and from him the first Egyptian dynasty must be held to spring."

This is the logical conclusion to be derived from the Biblical accounts of the origin of nations. Furthermore, this concept was fixed in the subsequent literature of the Hebrews. In the Hebrew, the name for Egypt is Mestraim, a name which is clearly derived from Mizraim, the son of Ham. Josephus commented on the relation between Mizraim and the Egyptians thus:[9]

> . . . The memory also of the Mesraites is preserved in their name; for we who inhabit this country [of Judea] called Egypt Mestre, and the Egyptians Mestraeans.

Whether Mena is recognized as the same person as Mizraim of Scripture, or whether he is regarded as a near descendant of Mizraim, is not important here beyond the proper setting of this incident at a date not far removed from the incident of the Genesis Flood. Of vital importance is the recognition that the Dispersion was not an incident that occurred millenniums back in the predynastic period. It is intended here to demonstrate that the Dispersion incident occurred about 27 years before the unification of Egypt under Mena.

There is thus every probability that Mena was indeed the same person as Mizraim, the grandson of Noah. The period between the Flood and the Dispersion is not one to be measured in millenniums or even in a multiplicity of centuries. While it may not be possible to define the length of that period in an exact manner, it will be shown that there is no demand for assuming a period in excess of 200 years and that a period of 25-45 years shorter than this is entirely probable.

A somewhat vague clue to the chronology of the Dispersion incident is provided in the Genesis account which reads:[10]

> And unto Eber were born two sons; the name of one was Peleg; for in his days was the earth divided.

This statement has been interpreted to refer to the division that occurred at the time of the Dispersion. It is possible that the reference relates to a division among the people relative to a retention or rejection of a recognition of the God of Noah. If the latter is the correct meaning, then a period of half a century or more is allowable between the birth of Peleg (born 101 years after the Flood)[11] and the incident of the Dispersion. This deduction is in satisfactory agreement with the conclusion reached in Chapter XIV of a previous volume[12] to the effect that the period from the unification of Egypt under Mena to the end of Dynasty V (not far removed from the famine of Joseph's time) was about 479 years. The problems before us are (1) that of showing that there are evidences for the Dispersion incident shortly before the unification of Egypt under Mena and (2) that what is known archaeologically for the period prior to this can be accounted for within a period not in significant excess of one and one-half centuries.

If our confidence in the reliability of Scripture for the statements under consideration has not been misplaced, we should then find indisputable archaeological evidence of a dispersion of peoples from Mesopotamia into Egypt, and into the neighboring territories, at a point shortly before the unification of Egypt under Mena. This migration should be clearly revealed in the territories of Syria, Palestine, and even into Asia Minor, since migrating peoples from Mesopotamia would of necessity pass through the territories of Syria and Palestine, some undoubtedly electing to settle in the alternate direction of Asia Minor.

Such a migration must certainly have resulted in cultural change or a series of cultural changes at sites along the route to Egypt, each people being subject to displacement by the next wave of migrants. The historical era in Palestine and Egypt has been divided into epochs, each marked by major cultural changes. Such a widespread cultural change marks the beginning of what is called the Early Bronze Age, dated in terms of Egyptian history in the late prehistoric period, just prior to the First Dynasty in Egypt.[13]

> . . . Moreover it is possible to date each phase according to Egyptian dynastic chronology: Early Bronze I . . . was contemporary with the *latest predynastic period* in Egypt. . . .

While historians have no basis for providing a figure, in years, prior to the beginning of dynastic history for the beginning of Early Bronze I, it should be clear that we are dealing with a point *late* in the predynastic era in placing the Dispersion coincident with the migration of Mizraim into Egypt, since Egypt must have existed for a period of years in a divided state prior to this unification. *That there did occur at this point an intensive migration of peoples into Syria, Palestine, Egypt, and Asia Minor and even into the Aegean Islands is witnessed by archaeology in an unequivocal manner. Furthermore, this migration of peoples is recognized as having had its origin in Mesopotamia.*

I. The Era of Mena Correlated in Time with Mesopotamian History

Fortunately for the problem at hand, there is no difficulty at all in the matter of correlation of the late predynastic period in Egypt with Mesopotamian history. It is only necessary to determine the point in Mesopotamian archaeology marked by the beginning of Early Bronze I. If we find this point marked by a notable migration *out* of Mesopotamia into the surrounding areas including Egypt, we may consider that we are again on solid ground in the further development of the chronology of the entire ancient world.

The beginning of Early Bronze I in the late predynastic period of Egypt is tied in unmistakable fashion to Mesopotamian history for the period known as *Jemdet Nasr*. This culture is so named for the site at which it was first discovered archaeologically. In substantiation of the recognition of this correlation by modern scholars, we refer to the statements of Albright.[14]

> *In the transitional period which led from Late Chalcolithic into Early Bronze I,* . . . may be placed Stages VII-V/IV on the eastern slope of Megiddo. This phase must be interpolated between Beth-shan XV and XIII, and corresponds to Stratum XIX on the Megiddo mound proper. In Stage V, were discovered a number of sherds impressed before baking by cylinder seals with animal and floral designs. They were first attributed by Frankfort to the Early Dynastic I or II of Mesopotamia, but in 1945 Dunand published some thirty similar impressions from the lowest level of Byblus which have altered the picture. *There can be no question that Dunand is substantially right in correlating them with the Jemdet Nasr period in Mesopotamis.* [Emphasis ours.]

Thus evidence from Megiddo and Byblus provides us with a basis for correlating the beginnings of Early Bronze I in Egypt with the Jemdet Nasr culture of Mesopotamia. Not only so, the evidence pins the correlation to a *narrow peri-*

od in the history of Mesopotamia, since the Jemdet Nasr culture had but a brief existence.[15]

> and in the probably rather short *Jemdet Nasr* period, we find a characteristic ware with designs in black and plum red. This phase is recognizable at Ur, at Uruk (II-III), Gawra (VII-VIII), Uqair (II-IV), and other sites, and the Uruk innovations of writing and seal-making were developed.

It is to be noted that, as in Egypt, so in Mesopotamia the Jemdet Nasr era marks the beginnings of dynastic history. Hence the point marks a widespread trend toward nationalism, as is to be expected to follow the Dispersion incident. Of this era, Piggot wrote:[16]

> ...We are now approaching so near to the recorded history and king-lists of Mesopotamia that we can give an approximate date in years for the Jemdet Nasr — about 3000 B.C. [*sic*] — for it was followed by the period of the Early Dynasties. . . .

The correlation of the beginning of Early Bronze I with the Dispersion from Babel becomes reasonably complete if evidence is at hand to indicate that the short-lived Jemdet Nasr culture of Mesopotamia and other contemporary cultures became scattered over the area of the then known world.

II. Evidences of the Dispersion from Mesopotamia at the Beginning of Early Bronze

If one can but free his thinking from the strangle-hold of popular opinion, the evidences become overwhelming that the beginning of Early Bronze I marks the point of the Dispersion as recorded in the Scriptural accounts. The magnitude of the migration of cultures at this point has been such as to call forth expressions of some astonishment on the part of scholars. Since, as far as the writer is aware, not a single one of these scholars has entertained the slightest recognition of this migration as that of the Genesis account, there is no call to depreciate the weight of the evidence before us. Continuing the statements noted above, Albright wrote:[17]

> . . . Towards the end of the fourth millennium [*sic*] there must have been an ***exceedingly intensive transfusion of culture going on in the Near and Middle East.*** Syria and Palestine naturally became the cultural intermediaries through which ***Mesopotamian influences streamed into Egypt in the period just before the First Dynasty,*** as has been demonstrated particularly by Frankfort and Scharff. [Emphasis ours.]

Here then, at the very point demanded by our reasoning, are to be found the evidences of migrations of peoples *out* of Mesopotamia through Syria and Palestine *into* Egypt, migrations so extensive as to have had no parallel in ancient times, with the possible exception of the migrations into and out of Palestine at the point of Joshua's conquest.

III. Evidences of the Dispersion into Palestine

The existence of known settlements in Palestine prior to Early Bronze is limited to a very few sites. Notable are the settlements at Mt. Carmel, at Jericho, at Megiddo, and at Beth Shan. Garstang commented as follows on the evidences to be noted at this time at the site of Jericho:[18]

> . . . but danger began to loom ahead when the expansion and activities of distant societies resulted in repeated movements of people from their settlements in search of new homes beyond their borders. The chief driving power for these migrations seems to have originated in Southern Babylonia. . . .

It follows that all of the new settlements which had their beginnings at the time of this "transfusion of cultures" represent peoples who either migrated out of Mesopotamia at the time of the Dispersion or else who had been displaced by these migrations and in turn were obliged to seek new living quarters. It is thus of interest to note the large number of settlements in Palestine which had their origins at this time. Garstang continued:[19]

> . . . In short, we may regard the Prehistoric Period as having ended, and the history of Jericho as beginning, with this dated epoch.
>
> In Palestine many great Canaanite cities have been shown by archaeological discoveries to date their origins from these times, such as Hazor, Taanak and Megiddo on the north-eastern trade route, and Shechem, Beeroth and Jerusalem in the hill country to the south; and probably the same is true of most of the cities of the plains.
>
> The new world now enfolded Jericho, where also a complete change of civilization, coupled with signs of destruction of the previous settlement, argues a change of race. The general increase of population throughout the country involved a division of lands between the different city groups as well as protection for their flocks. . . .
>
> . . . and there can be little doubt but that the new city [Jericho] was founded and fortified by a people migrating either from further north in response to pressure from beyond, or from Mesopotamia itself.

This widespread infusion of new peoples into Palestine is marked by the beginning of what Miss Kenyon calls the "Proto-Urban Period."[20] It was the direct result of this infusion by numerous new peoples that led to the city-state organization that followed, and which must have represented the history of Palestine throughout the Early Bronze Age, reaching to, or nearly to, the point of the Conquest. Miss Kenyon commented on the different types of pottery which appear in Palestine at this time.[21]

> So far, we have mainly discussed the different elements in terms of different groups of pottery types. Acculumated archaeological experience has shown that a distinctive group of pottery types in fact is the evidence, sometimes the only evidence, which survives of a distinctive group of people. Therefore we can translate our A, B, and C pottery types into three groups of people who appear in Palestine at this time. They come in as independent groups, as the Jericho evidence shows, and as they penetrate into the country some of them intermingle. . . . Unfortunately, the homeland of none of these groups can be satisfactorily identified, since we cannot point to the same pottery elsewhere. But there is little doubt that eventually we shall be able to do so. . . .

IV. Evidences of the Dispersion in Syria

Three adjacent sites in the north-western corner of Syria were excavated by Sir Leonard Wooley between 1936 and 1949.[22] The principal site, now known as Atchana, was identified by written records as the ancient site of Alalakh, a town mentioned but once otherwise in known ancient inscriptions. It was found that the archaeology of the three sites, Tell esh Sheikh, Tabarah, and Atchana represented a historical sequence, the history of each site coming to a close with the beginning of the next with but sufficient overlapping of the pottery types to establish the sequence. The various levels could be associated with Mesopotamian history by means of seals and pottery types. The upper levels at Tabarah indicated that:[23]

> . . . Tabarah had been suddenly deserted and its site had been left uninhabited for nearly a thousand years. The pottery fragments showed that this desertion coincided with the incoming of the new race which built a new town for itself at Atchana, a race that enjoyed the free use of metal and turned its clay vessels on the potter's wheel; it was before this formidable invader that the Khirbet Karak people, ignorant savages in comparison, fled to the south and east.

The pottery in level XIV at Atchana was found to be contemporary with Jemdet Nasr culture,[24] and was thus contemporary with the Dispersion from Mesopotamia.

> . . . This would accord with the evidence of Atchana, where level XIV (the third occupation-level after Tabarah) is contemporary with the "Jemdet Nasr" period. . . .

The fact that the upper levels at Tabarah and the three lower levels at Atchana reveal evidences of the extensive migrations of this period suggests that there occurred at some sites a rapid series of cultural changes which reflect waves of migratory peoples, each displaced by the next. It is to be noted[25] that the migratory period involved more than a single level also at Megiddo and Bethshan. The suggestion is that the incident of the Dispersion was not one that occurred over night. It evidently represented a series of movements in sequence over perhaps a period of several years. This point is of major significance in the interpretation of the predynastic evidence in Egypt.[26]

V. *Evidences of the Dispersion in Egypt*

Archaeologically, there is no fact more thoroughly established than that there was a series of migrations of peoples into the valley of the Nile just prior to the beginning of the dynastic period.[27] Immediately prior to the beginning of the dynastic period, Egypt existed under a divided rule. This follows from the fact that Mena unified the government under a single king. Dynastic history in Egypt begins with this unification. But unification presupposes that there was a divided rule to be unified.

Eusebius (by Lepsius) states that the reign of Mena was preceded by the reigns of 10 kings of This (Thinis).[28] Strangely, historians would have these 10 kings reign in sequence.[29] But if the kings before the dynastic period ruled in sequence, then from what was Egypt unified under Mena? The statement of Eusebius that the 10 kings were of Thinis does not necessarily demand a sequence of kings ruling at Thinis; more probably reference is to the site of origin of the 10 kings.[30]

> Manetho divided his list of kings into dynasties, with the name of the locality from which each family originated.

It may be presumed that Mena himself was one of these ten local kings and that, as the unifier of Egypt, he continued to rule at Thinis, the capital city of Dynasty I. This interpretation does not preclude the possibility that there were still other local kings in Egypt at the time who had their origin at some other site than Thinis.

These predynastic kings should thus be recognized as leaders of clans that migrated into Egypt as part of the Dispersion movement. The Elamite influence observed in Egypt in the course of this series of migrations is thus provided an explanation.[31] The probability is also large that the Libyans were also of Mesopotamian origin, some settling on the northern coast of Africa, while others mingled with the peoples entering the Nile Valley.[32] The Egyptian influence at Jericho and other sites in Palestine may have had a similar origin and does not necessarily indicate trade between Egypt and Palestine this early, as has been assumed by some.[33]

VI. Evidences of the Dispersion in Anatolia

Asia Minor is divided naturally into two parts by the Taurus Mountain range, which traverses the territory from south-west to north-east. That part of Asia Minor to the north and west of the Taurus Mountains is known as Anatolia. Archaeology reveals that there were no settlements in Anatolia prior to the transition between Chalcolithic and Early Bronze, though flints have been found in this area from the Paleolithic (which is here regarded as antediluvian).[34]

Attempts to determine the origin of the first settlements in Anatolia did not provide conclusive answers.[35] With these first settlements appearing at the very time when elsewhere are to be noted the evidences of intensive transfusion of cultures from Mesopotamia, these settlements should also be recognized as part of the movement of peoples at the time of the Dispersion. The fact that some of the evidences point to an origin in the Aegean Islands need be no cause for surprise. The probabilities are large that the Taurus Range continued to represent a barrier to peoples seeking a new home, and this Aegean influence in early Anatolia may well represent only an entrance into the territory by the "back door." It is again to be noted that the Dispersion incident may well have encompassed a period of several years, so that some of these peoples may well have settled first in the Aegean Islands and later moved to the mainland; or possibly the reverse is true, that peoples from the mainland moved into the islands.

VII. The Origin of the Pre-Dispersion Inhabitants of Palestine and Elsewhere

One might assume from the brief Scriptural account that all the people who survived the Flood, together with any descendants born in the meantime took part in the migration into Mesopotamia. This is an inference beyond that which is stated. The account reads:[36]

> And as men migrated in the east, they found a plain in the land of Shinar and settled there.

The early Scriptures are a most incomplete record, and it may be presumed, on the basis of subsequent developments, that this migration into Mesopotamia was more or less limited in terms of the total but small population, and that the Biblical account deals with this group in preference to those who did not thus migrate into this area, because this people included the ancestors of Abraham who is the central character of the subsequent account. There is nothing in Scripture to preclude the recognition of settlements elsewhere, as in Palestine and Syria.

While it is generally believed that the earliest home of civilized man was in Mesopotamia, the actual difference in time between the first settlement at Hassuna in Mesopotamia (now recognized as the oldest) and at Jericho become relatively insignificant. Certainly, there are ample archaeological evidences to indicate that Jericho, and probably a few other sites, were occupied for a significant period of time *prior* to the Dispersion. These settlements, wherever found, may then usually represent the descendants of those who did not migrate into the Mesopotamian Valley.

VIII. On the Population at the Time of the Dispersion

A difficulty may rise in the thinking of those accustomed to believe that the predynastic period is one to be measured in millenniums. The period allowable by a strict interpretation of the Biblical figures for the period between the Flood and the Dispersion can hardly exceed 200 years and may well require inclusion within a period of c. 155 years.[37] Is even the maximum allowable period of 200 years adequate for a multiplication of the population to meet the specifications of the Biblical account and to also encompass archaeological evidence that may be brought to bear on the problem? In any case, the record notes specifically an unusual rate of multiplication in population following the Flood.[38] While the rate of multiplication can only be estimated, it is not unreasonable to assume that each married couple during this period had an average of 12 offspring over a period of 155 years encompassing six generations. The population at the end of this period would then approach half a million, and this figure may be taken as minimal in view of the long ages of this early people and the longer period of virility. But even this figure is probably adequate to account for any archaeological evidence that comes down to us from the period prior to the beginning of Early Bronze.

The archaeological evidences from this early period indicate very small communities. For example, Troy I was settled after the Dispersion; Troy II, its successor, was a settlement only about 100 yards in diameter.[38a] Troy I was then even smaller and evidently not the first settlement in the area, since a still smaller settlement was found a short distance away. The group who migrated to this area were then comprised of but a few families.

In the cemetery at Alaja were found only 13 graves, even though this represented a succession of several occupation levels.[39] Because of the paucity of burial evidence, it was presumed that these burials included only those of the royalty. While a degree of wealth was suggested, the appertinences provided no basis for presuming a royal origin.

The group that settled at Jericho at the time of the Dispersion occupied an area only 100 by 250 yards,[40] the total area hardly equaling that of an ordinary city block of today. The displaced settlement was evidently much smaller; yet the site of Jericho seems to have been one of the larger settlements in Palestine during this period.

The number of burials found at Mount Carmel throughout the entire Neolithic period was only 60,[41] a figure which hardly reflects a duration to be measured in a multiplicity of millenniums as held currently. A number of cemeteries in Egypt from this early era have been investigated, and in spite of the fact that some of the burials belong to the post-unification period, the number of burials in any one cemetery rarely exceeded one hundred, and more often the number was between 15 and 50.[42] Even if we multiply the number of known settlements from this era by a factor of a hundred or more, these can still all be accounted for with a total population of half a million. As will be noted in a later chapter,[43] the period from the Dispersion to the Unification was only some 27 years in length, allowing for an additional generation, but by this time the population could have been three million instead of one-half million.

The total picutre is then one that favors such a short period, in contrast to popular opinion which would allow time for multiplication of the population over a period of a multiplicity of millenniums.

The problem of the elevated mound sites of the predynastic period will be considered in the next chapter. In this same chapter, the fallacy in the deductions of Petrie, de Morgan, and others which demanded a minimum of 10,000 years for the predynastic period, will be noted.

Notes and References

(1) Gen. 11. (2) S-RP (old series), Vol. VII, pp. 131, 132. (3) Vol. I, Chap. IX, Sect. IV. (4) *Ibid.*, Chap. X. (5) *Ibid.* (6) *Ibid.*, Chaps. XI, XII. (7) *Ibid.* (8) W-M, p. 9; Gen. 10:6; both names are from the same root (U-AOT, p. 84). Even scholars who retain some degree of confidence in the reliability of the Genesis account, tend to regard the Dispersion as an event that occurred far back in the prehistoric era. In the light of the developments outlined in this and a previous volume, this view represents a premature and unnecessary compromise of Scripture. (9) J-AJ, Bk. I, Chap. VI, par. 2. (10) Gen. 10:25. (11) Gen. 11:10-16. (12) Vol. I, Chap. XII, Sect. IX. (13) A-AP, P. 21, (14 *Ibid.* (15) P-Pl, p. 56. (16) *Ibid.* (17) See ref. 13. (18) G-SJ, p. 75. (19) *Ibid.*, pp. 76, 77. (20) K-AHL, Chap. IV title. (21) *Ibid.*, p. 97. (22) W-FK is a report on these investigations. (23) *Ibid.*, p. 36. (24) *Ibid.*, p. 35. (25) *Ibid.*; see also quot. of ref. 14 where *several* archaeological stages at Megiddo are from this same transition period. (26) See Chap. VIII. (27) See quot. of ref. 17. (28) Cited in P-HE, Vol. I, p. 1. (29) *Ibid.*, p. 2. (30) E-EA, p. 24. (31) P-PE, p. 49. (32) *Ibid.*, p. 47. (33) A-AP, p. 72. (34) L-EA, pp. 53, 59. (35) *Ibid.* (36) Gen. 11: (RSV). (37) Chap. VIII, Sect. VII. (38) See ref. 36. (38a) B-T, p. 60. (39) L-EA, p. 37. (40) G-SJ, p. 77. (41) K-AHL, p. 37. (42) Petrie (P-HE, Chap. I) has summarized these various investigations of Egyptian cemeteries and provides data from each. (43) Vol. I, Chap. XI.

CHAPTER VIII

ARCHAEOLOGY AND THE DURATION OF THE PREDYNASTIC PERIOD

Paleolithic man was separated from the subsequent phases of his history by a world-wide catastrophe. This is evidenced by the fact that not a single significant link has been found to tie Paleolithic man with Mesolithic man who is presumed to follow. The closest ties are evidently to be found at Mount Carmel. On the seaward side of the mountain are a number of caves showing human occupation over "tens of thousands of years during the Paleolithic period" [*sic*]. The flint industry of Mesolithic man does not seem to be derived from any upper, known Paleolithic culture.[1] A more detailed consideration of Paeolithic man must be left for a subsequent work. We are interested here in demonstrating that the evidences of man in Palestine from Mesolithic to the dynastic era are not at demonstrable odds with the thesis that this entire era may be encompassed within a relatively brief period of time, i.e., not in excess of two centuries. This view is, of course, at gross odds with the popular concept which supposes that several millenniums must be allowed for the period in question.

The currently accepted views find their basis in the principle of uniformitarianism which is fundamentally and philosophically at odds with the concept of a universal catastrophe as recorded in the Genesis account of the Noachian Flood. The view is here held that it was the Noachian Flood that separated the Paleolithic from the Mesolithic that followed. While the initial phase of the Flood lasted only about one year, there must have been a significant period of time after this when the climatic conditions were totally different from those which preceded the catastrophe.

It is not claimed here that the period in question can be proved to have been of brief duration. It *is* claimed that there is no genuine demand apart from the starting philosophy that we accept the view that the period encompasses a multiplicity of millenniums. The evidence can be rationally fitted into á structure which recognizes a notably different climatic situation during this period — a period to be measured in decades, not millenniums.

I. Limitations of Evidence for Predynastic Palestine

As noted in the previous chapter, the end of the Chalcolithic Age and its emergence into Early Bronze is marked by an influx of Mesopotamian influence into Egypt, Palestine, and Anatolia, which influx we take to represent the result of the Dispersion from Babel as described in the Genesis account. This incident belongs to the period of the Jemdet Nasr culture in Mesopotamia, and the point is marked archaeologically by Stratum XIX on the Megiddo mound proper.[2] While it might appear desirable to trace the predynastic period of Palestine back in time from evidences on the Megiddo site, this is not feasible, since occupation of the site does not encompass the entire period. The most complete sequence of cultures are to be found on the site of Jericho. The Chalcolithic Age, which is presumed to be the connecting link between Neolithic and the dynastic period, is not represented at Jericho, however.[3] It is thus presumed that this represents an era of nonoccupation at Jericho and must be inserted into the sequence of cultures found at Jericho.[4]

> These developments [sequence of cultures for the period under consideration] cannot be paralleled at any other site in Palestine or elsewhere. The history of the development of the settlement in Palestine has therefore so far been illustrated from Jericho alone.

II. The Predynastic Period at Jericho

Since this predynastic sequence from Mesolithic through Neolithic is illustrated only at Jericho, any evidence that truly demands a recognition of several millenniums duration for this period should appear in the archaeology of this site. The archaeological finds at Jericho down to bedrock have been reviewed by Miss Kenyon in her recent works.[5] It may be presumed that she has included any and all details pertinent to the point in question, since she was an active archaeologist at this site. A summary based on her work of the finds pertinent to the chronology of the site is here reviewed.[6]

Excavations to bedrock at the Jericho site revealed that the limestone composing it was covered by about one foot of clay which had been removed over an extended area to provide a foundation for a building structure on the rock formation. At one end of this excavated area, a substantial wall of stones enclosed an area about 10 by 20 feet. Since the structure was unlike any dwelling remains observed, it was presumed that this structure represented some sort of sanctuary. Interestingly, two large blocks of stone in the wall of the structure had holes bored through them to a depth of some two and one-half feet, an accomplishment somewhat surprising for the level of culture presumed to characterize this early period. The structure had eventually been burned; charcoal from the wooden beams in the roof yielded a date by the C-14 method 7,800 B.C. ± 210 years. The bases for the total rejection of this date and others subsequently referred to are presented in a previous chapter.[7]

At another small area on the site, it was found that a deposit of some 13 feet of clay existed between bed-rock and the so-called Natufian culture. This 13 feet of clay revealed no signs of a solid structure and no evidences of the use of pottery. The clay deposit was made up of a large number of mud floors, one above the other, each bounded with slight bumps which were regarded as remnants of walls of the hut-like mud structures. Only above this were evidences found of solid houses.

The remains of the more solid dwellings of the subsequent period were enclosed by a wall, suggesting danger from depradations by either man or wild beast. At one point on the wall, and extant to a height of some 30 feet, were found the remains of a stone tower built against the inside of the wall. The whole comprised "an amazing bit of architecture" for the era involved. Within this wall could be observed a sequence of three successive phases of dwellings whose combined period of life would seem to approximate that of the wall itself. The upper of these three building phases had been burned, and C-14 analysis of the charcoal from the beams gave a date 6850 B.C. ± 210 years. This culture was regarded as about 1000 years later than the stone sanctuary and 2000 years earlier than the earliest known village elsewhere in Palestine. From the similarity of flints and harpoons, this culture was correlated with the lower Natufian at Megiddo.

Evidences of severe erosion by water appeared in the upper levels of this culture, apparently representing a period of non-occupation following abandonment of the site. The length of this period of erosion could not be determined and "may have been a matter of years or of centuries." Above this evidence of erosion, a new culture appeared which was still characterized by an absence of pottery. This culture was distinguished in name from its predecessor by designating it Pre-pottery Neolithic B. The flint artifacts would identify the people as the Tahunians, who had had a prior nomadic existence elsewhere but who now settled on the abandoned Jericho site. The culture could be distinguished archaeologically by the new type of architecture which must have been developed prior to occupation of this area but which has not been discovered elsewhere as yet. While no pottery of this people has been found on the Jericho site, vessels of limestone "finely worked and carefully finished" were in use. The first settlement by this people had no defensive wall about it, and the dwellings extended down the sides of the mound, indicating an increase in population over Pre-pottery Neolithic A.

A succession of 10 house levels could be traced at one point. At some time during the succession, a wall seems to have been built. At another point, 19 successive building stages were traced. In the 16th phase from the bottom, charcoal residues were obtained which gave a C-14 date 6250 B.C. ± 200 years, which date is another half millennium later than that attributed to Pre-pottery Neolithic A. At still another point, 26 building stages were traced, and the 9th from the bottom gave a date 5850 ± 160 years.

The end of Pre-pottery Neolithic B was also marked by severe erosion, the length of the period involved being again undeterminable. The culture that followed brought the art of pottery-making with them, but the cultural level otherwise represents a marked retrogression. This people lived in pits cut into the ruins of the earlier town, a type of life otherwise known in the Chalcolithic period near Beersheba. To this culture, Miss Kenyon gave the name Pottery Neolithic A. The origin of the culture is known only in terms of a few pottery fragments at various localities in Palestine, suggesting a wide distribution but a small population.

The subsequent culture, called Pottery Neolithic B, built their primitive huts in the pits dug out by their predecessors. The break in the culture at this point is not sharp. The pottery is more refined, but continues to be mixed with that of the preceding culture. Pottery like that of the new culture had been found also at Sha'ar ha Golan, just south of the Sea of Galilee.

At Jericho, Early Bronze follows Pottery Neolithic B. As noted previously, the so-called Halafian culture from Tell Halaf in Mesopotamia and the Ghassulian culture from east of the Jordan Valley are regarded by some scholars as necessarily inserted in the time sequence between Pottery Neolithic B and Early Bronze. The period between Neolithic and Early Bronze is known as Chalcolithic, a name designed to indicate the combined use of copper and stone. There are no evidences for the use of copper at Jericho or elsewhere in Palestine at this time. The archaeological sequence to be accounted for may be summarized as follows:

1. The stone sanctuary resting on bed-rock.
2. The numerous floors beginning on bed-rock, each evidently representing the remains of mud hut dwellings and making up in total some 13 feet of clay.
3. Three successive building phases of a more solid type and included within the duration of the earliest wall.
4. Evidences of severe erosion for an undeterminable period.
5. Successive building levels ranging in number from 10 to 26 and belonging to Pre-pottery Neolithic B.
6. Further evidences of erosion over an undeterminable period.
7. The pit dwellings of Pottery Neolithic A.
8. The extension of Pottery Neolithic A into Pottery Neolithic B, with huts built in the pits carved out by the previous people.
9. Allowance for the Chalcolithic period, presumed to require insertion between the end of Pottery Neolithic B and the beginning of the Early Bronze Age.

III. An Alternate Interpretation of the Archaeology of Early Jericho

The currently accepted interpretation of the archaeology of early Jericho, as at other sites, is based on the uniformitarian concept which does not recognize a climate any different than now and which would assign to each of the successive mud huts and numerous subsequent structures durations up to 50 or 100 years each. By the alternate thesis here defended, the period is that immediately following the Noachian Flood, during which time the conditions must have been notably different from those in later times. This period must have been characterized by severe earthquakes and geological disturbances involving a gradual sinking of the ocean bottoms or, what amounts to the same thing, the rise of land levels in mountain formation. Such changes must certainly have left the surface of the earth dotted with numerous internal lakes and seas, some of which remain to this day, others having lost their waters in whole or in part by schisms in the elevated areas which served to confine them.

Abundant geological evidence is at hand to indicate that such a situation existed in the prehistoric era with which we are dealing. These evidences will be interpreted differently, depending on one's philosophy. By the uniformitarian concept, the changes involved were gradual and extended over a period to be measured in a multiplicity of millenniums, thus requiring assignments of 50 to 100 years or more for the duration of the individual structures. In terms of the philosophy which accepts the Scriptural accounts of the Noachian Flood as historical, this series of changes occurred over a relatively brief period of time. In order to avoid the introduction of concepts of controversial nature that are not pertinent to the problem, the length of this period is taken to have been less than two centuries, though the writer believes that the period could be reduced by another half century without significant damage to the thesis.

A number of evidences are at hand to indicate that the early prehistoric geography was characterized by the existence of numerous inland seas that have since disappeared. At the time of Herodotus, a legend was extant[8] to the effect that at the time of Mena's migration into Egypt, much of northern Africa was a vast sea, the waters of which have since been emptied into the Mediterranean, leaving behind a land that is now desert, except for that part which comprises the Nile Valley and the Delta region of the Nile. There is also an extant legend that in ancient times the Gulf of Aqabah, a branch of the Red Sea, extended some 33 kilometers north of the present shore line.[9] This legend has been discounted as having any factual basis since there are no evidences that the shores of the Red Sea have dropped significantly during the past 3,500 years.[20] This may be quite true. The conditions to which we refer antedate this point by another 700 years by the shortest possible interpretation of Bible chronology. Thomas points out evidence of an internal lake anciently existing in what is now the desert of Arabia.[11] The Great Salt Lake of Utah represents clearly the remnants of such an internal Sea on this continent, having an original shore line thousands of feet higher than the level of the present lake. The entire Mississippi Valley has had a similar history.

The existence of these numerous inland seas could be expected to serve as a source of a much heavier average rainfall than is common to these areas at the present time. With the gradual elevation of the average temperature, commonly associated with the disappearance of the ice age, it is quite possible that this rainfall was more severe than anything known on the earth at the present time. Evidences are at hand to substantiate the concept of a much heavier rainfall throughout the area of Asia than now exists. Piggot refers to the observations of Sir Aurel Stein, who examined extensively the early evidences of man in Baluchistan and India. Piggot commented:[12]

> . . . The abundant evidence of ancient occupation in the Baluchi hills or the Indus plain implies less exacting climatic conditions in the past than at present, and, though historical evidence implies that by the time of Alexander conditions in Baluchistan approximated to those of today, yet . . . there is good evidence for a heavier rainfall, and extensive forests in the Indus valley in ancient times.
>
> It is less easy to find evidence of the former climate of Baluchistan than it is for the Indus Valley. Today the territories of Makran, Kharan and Jhalawan in South Baluchistan, which contain a large number of prehistoric settlements are very sparseley populated (not more than two persons to the square mile in Kharan), and this population is partly migratory.
>
> In his explorations in Baluchistan these problems of climate and population were, of course, much before Sir Aurel Stein's eyes, and he was able to identify a large series of artifical stone-built dams and terraces known locally in Jhalawan as *gabarbands*, clearly designed to aid the irrigation of fields. The date of these is unknown but, as Stein remarks, they must reflect not only climatic conditions with a greater rainfall, but also a large population to provide the necessary labour for their construction. . . . Even though the age and culture of these works are still unknown, their presence is important in indicating greater rainfall in antiquity, and it is by no means improbable that they do, in fact, date back to the prehistoric occupation of the Baluchi Hills.

The observations of Stein would seem to eliminate any possibility that the conditions described belong back at the end of the Ice Age when the population was exceedingly scant, since they indicate a significant population. A date toward the end of the prehistoric period is more likely. At that time, the rains had decreased notably, but were still ample to provide water for irrigation if impounded during the rainy season. Albright and others have expressed wonder at just when climatic changes could have existed to allow for occupation of such sites as Ghassul, far out in the desert plain east of Jordan.[13]

> It would be interesting to know just what were the changes in climate which led to the abandonment of sites like Ghassul, situated far out in the Jordan plain where the soil could not be irrigated without prohibitve effort. It seems reasonably certain that there were more lateral streams flowing into the Jordan then than there are today. . . .

It is stated in Scripture that prior to the destruction of Sodom and Gomorrah in the era of Abraham, this area at the south end of the Dead Sea was well watered . . . like as the Garden of the Lord.[14] This area is still a fertile one, though now it requires irrigation to be utilized. Evidently, a condition of adequate rain continued to exist for several centuries after the beginning of the dynastic period. A heavier rainfall in the desert region of Egypt is indicated by the numerous finds of flints over this area.[15] Since the winter rains at Jericho are still severe at times,[16] as compared to the all but total absence of rain in the Baluchistan Hills, it may be logically concluded that Jericho, in this predynastic period, was exposed to torential rains of exceeding violence. It was this sort of climate that man faced when he first decended from the mountainous region after the Flood.

Under these conditions, the mud shelters revealed archaeologically at Jericho in the Neolithic period could be expected to have had an exceedingly short period of use, possibly requiring rebuilding more than once a year. Ceram commented on the instability of adobe dwellings in Anatolia under conditions of "sparse rain."[17]

> . . . The buildings which make up these villages are still constructed of bricks of unfired clay — bricks which crumble under the baking sun and slowly dissolve under the sparse rain. . . . Such adobe houses seldom last more than twenty years.

If such dwellings rarely have a life of 20 years in the relatively dry climate of modern times, it is doubtful if similar mud dwellings at Jericho and elsewhere would survive a single season under conditions of heavy rainfall.

The mud used in these structures was not baked as in later times, and once used, the disintegrated bricks cannot be reused again.[18] The only choice is to level off the ground as best can be done and rebuild, using new clay. Thus was the tell built up *rapidly* from these frequent rebuilding procedures.[19]

> . . . The growth of these tells is particularly characteristic of those areas in which the local building material was mud-brick, for a destroyed building of mud-brick disintegrates into mud again, which cannot be used again in the same way that stone from a building can be. The growth of the tell is therefore more rapid.

The instability of even sun-dried brick under conditions of heavy rain has been reported by various investigators. Glueck writes of his experience in the area of the southern reaches of the Red Sea.[20]

> . . . In April, 1940, a terrific rain- and hail-storm literally washed half of the mud-brick village [Aqabah] away. Many of the mud-brick walls simply dissolved. . . . Small wonder that such bricks go to pieces during the first heavy rain!

Garstang describes the actual situation at Jericho in modern times. He pointed out that an additional factor may have served to give a very short life to the early mud dwellings on this site. Water from the spring evidently seeped upward continuously to add to the destructive effects of the rain. He wrote:[21]

> Even before the Neolithic settlement a part of the original channel [water spring] seems already to have become covered, as the earliest floors of occupation within the excavated area were based upon a wet deposit, the traces of which rose through successive floor levels to a height of 12 or 15 feet. This may explain to some extent why the earlier buildings are found to have been *frequently rebuilt*. . . . It is true that *mud-bricks*, such as were *used throughout the life history of Jericho, were peculiarly liable to decay*. . . . *Sometimes too, in winter, rain falls very heavily, so that* unless the outer walls were protected from the elements, *they would be liable to perish*. [Emphasis ours.]

When these facts are given due consideration, a quite different interpretation of the archaeology of early Jericho becomes most reasonable. The 13 feet of clay representing numerous floors, each showing evidence of the meager remains of mud dwellings, need not be taken to represent in total a period of time in excess of a very few years, probably not more than a decade, and possibly significantly less, if the violent rains required a rebuilding more than once a year. Allowances of a life of 30-100 years for mud houses[22] has thus resulted in a grossly and unnecessarily expanded chronology for this area. Since this series of mud floors was found in one small area only, it is probable that this area represented the total population and that the era is the same as that of the life of the "sanctuary," which was probably a united effort to keep any kind of a roof over their heads during the period when their individual dwellings were being washed out as fast as rebuilt. The failure to use stone more liberally for dwellings evidently resulted from the necessity of having to carry such materials from a distance. Even in later times, it was only the foundations of the walls that were constructed of stone. Since mud was of necessity used to seal the spaces between the wood beams of the ceiling, it may be presumed that even this stone building did not provide an efficient shelter from the heavy rains. The destruction by fire may then be attributed to attempts to use fire within as a source of heat.

The three successive building phases within the duration of the early wall may then be presumed to belong to the same period when these conditions prevailed. The observation that the three building phases were eventually washed in to fill much of the wall enclosure reveals the continuation of these untoward circumstances against which the new inhabitants were but little more successful in their competition with the elements.

The 26 successive building levels of Pre-pottery Neolithic B then represent the attempts of a new population to succeed where the previous population had failed, and evidently with not much better success. The life of the dwellings may have been somewhat longer than those of the previous phase, but there is certainly no valid reason for supposing a usage for a multiplicity of years. While these are described as "more solid structures," it is not to be inferred that these were all-stone structures. There is a possibility that more stone was used; also it is possible that the occupants had learned how to make brick of somewhat longer life. The rapidity of the succession of reconstruction is attested by comparision of the C-14 data. While the actual dates derived from the data have no necessary meaning, the relative dates may have. At the point where there were 19 successive building stages, the 16th from the bottom (or fourth from the top) gave a date 6250 B.C. ± 200 years; at the point revealing 26 such phases in sequence, the 9th from the bottom (18th from the top) gave a date 5850 ± 160 years. Since the lowest structure in both cases undoubtedly had contemporary origins by the new population, the date for the structure 9th from the bottom is of later date than that in the 16th from the bottom. Even if one takes the latest possible date in one case and the earliest in the other to provide some sort of sense to the figures, it still remains obvious that the building phases were in such rapid succession as to indicate no appreciable time lapse throughout the entire sequence.

An even shorter period may be assumed for Pottery Neolithic A. The pit dwellings of this people suggest that the climatic problem at this time included a necessary protection from violent winds as well as rain. A similar brief period may logically be assigned to Pottery Neolithic B which followed the new occupants building their mud-huts in the pits dug out by the preceding culture. While it is, of course, not possible to assign any actual period of time to represent each of these phases or their combination, there is no genuine basis for presuming otherwise than that the entire predynastic period at Jericho, from Mesolithic to the beginning of Early Bronze, encompassed more than a relatively brief period of time; certainly two centuries is abundantly adequate.

IV. The Predynastic Period in Egypt

Perhaps the second most important basis on which the concept of a long duration for the predynastic period rests is that which has resulted from the investigation of a series of some 1400 graves from cemeteries scattered over the Nile Valley. These graves were examined by several different groups of investigators, the reports of which were summarized by Petrie in his work on Prehistoric Egypt.[23]

Each grave was assigned to one of 50 groups, depending on the relative amounts of certain types of pottery found in each grave. For example, graves containing a small amount of type A, a large amount of type B, and a small amount of type C were regarded as earlier than one containing a small amount of B, a large amount of C, and the beginnings of D. Each of the 50 groups, at the end of the process of assignment, contained the same number of graves, but did not necessarily represent equal periods of elasped time. Granting the validity of the method as a basis for assigning relative dates (which the author does not grant), Petrie thus had a sequence of graves in approximate chronolocal order of the groups. But a sequence is not a chronology.[23a] Except as it was possible to assign time periods to each of the 50 groups in the series, the entire sequence might represent a decade or a plurality of millenniums. On the basis of the "geological time scale" (however this scale may be defined), Petrie concluded that each of his divisions represented some 50 years of elapsed time on an average, thus giving his prehistoric period a duration of 2500 to 4500 years. At that time, the dynastic period was believed to have extended back into the 6th or 7th millennium; hence, the predynastic period was given a beginning c. 10,000 B.C.[24]

> It appears, then, only reasonable [*sic*] to grant the evidence of the numbers of graves as dating the prehistoric graves to 8000 to 10,000 B.C. To be asked to end them with the Ist dynasty at 5,500 B.C. is as late as we can ask geology to grant, and we may well put the beginning of that age at 8,000 to 10,000 B.C. In any case, the suppositions which would bring the Ist dynasty to 3400 B.C. and crowd the prehistoric into a few centuries before that, would seem to be quite irreconcilable with the geologic scales of time action.

Interestingly, scholars now take a date c. 3300 B.C. as maximum for the beginning of the dynastic period, with a lower date (c. 2800 B.C.) being accepted by a number of scholars. What was impossible in the thinking of Petrie for the dynastic period is now the accepted view, but scholars continue to cling to his interpretations of the predynastic period as if these figures were all but inviolate. Why should this obscurely defined geologic time scale represent a correct basis for measurement of this period?

The data from these graves are susceptible to a totally different interpretation. At other sites, the evidence of a rapid series of changes in culture were noted to have occurred during the period of the Dispersion, which may well have extended over a period of several years. During these migrations there was much by way of intermingling of groups, as indicated by the intermingling of cultures. Certainly the migrations into Egypt must have been exposed to the same influences that caused such mingling elsewhere. The variations in the amounts of various pottery types may then mean nothing more than the degree of mingling of the participants in the migration. There is no necessity for regarding his 50 groups as having any chronological significance whatever; the fusion of cultures may have continued through the life span of the migrants.

V. *The Predynastic Period in Mesopotamis*

The archaeology of the predynastic period in Mesopotamia provides a composite picture of a number of cultures existing side by side. The correlation between the various levels at different sites has been worked out in considerable detail for the mounds investigated.[24a] As in Palestine, however, the number of such mounds investigated represents but a small fraction of the total. That other cultures did exist contemporary with those already recognized follows from the inability to trace any of the three major pottery types appearing in Palestine at the end of Neolithic to their Mesopotamian origin, though it is clear that they have their origin in this area.[25]

The time relationships between these various cultures, as now recognized, are provided by Piggot.[26] While these relationships are evidently well-established, the time periods to be allotted to the various cultures remain a matter of conjecture. The extended periods assigned to these cultures would appear again to have been deduced on the basis of the "geological time scale," rather than from any evidence archaeologically.

We are interested here primarily in any contribution that the archaeology of Mesopotamia might provide in support of one chronological thesis or the other. Such evidence as is at hand parallels that noted from the investigations at the site of Jericho. There is the same evidence of a paucity of population for the earliest phases of occupation; these are commonly represented only by campfires. There are the same high mounds with indication of the same method of formation, i.e., the procedure of constructing one series of dwellings on the ruins of the preceding structures after simply leveling off the ruins and using new mud for each subsequent structure. There is also the same evidence of a heavy rainfall, which could be expected to result in a very short period of use for the structures, thus causing a rapid elevation of the mound. There is thus no solid archaeological basis for presuming an antiquity of the predynastic period in Mesopotamia significantly different from that deduced for Jericho.

VI. The Prehistoric Era in Asia Minor

The most ancient site thus far investigated in Asia Minor is the mound known as Yumuk Tepe, located some two miles inland from the modern seaport of Mirsin. Mirsin is located on the shores of the Mediterranean Sea, near its most north-eastern reaches. The mound comprises an area of about 12 acres and attained a height of some 80 feet as a result of the successive levels of construction. As the mound rose in height, its area decreased until, at its summit, it is only about 2 acres in extent. The mound has been investigated through some 33 occupation levels in a small sounding of probably less than 200 square feet. This dig reached to the watertable with still other occupational deposits below this.[26a]

The dynastic era begins with Level XI below the surface level, taken as Level I. The prehistoric era thus comprises the Levels from XII down to XXXIII and whatever is below the water level and not investigated. Level XII has been equated in time with the earliest levels at Troy and hence, by the altered interpretation, represents the approximate point of the Dispersion.

The levels from below water level through Level XXXIII and up to Level XXIII are classed as Neolithic; Levels XXIII to XII are classed as Chalcolithic. However, since Chalcolithic is not known in Palestine, these levels should be recognized as a late phase of Neolithic at Jericho. The depth of the mound height encompassed by Levels XXIII down to water level is about 30 feet. Evidence is at hand to indicate that here, as at Jericho, these early occupation levels were built up rapidly and followed each other in rapid succession. The pottery throughout this 30 feet is relatively homogeneous, a situation hardly reasonable for a period of a millennium or more, as currently held, but very understandable when this 30 feet of accumulation is taken to represent a period of one, or perhaps two at the most, generations.[27]

> In any case the deposits representing neolithic occupation on this site attained the astonishing height of nearly 10 meters; and though they illustrate definite stages of cultural progress as they rise, their main characteristics are relatively homogeneous.

This 30 feet of rise in the mound included only 9 levels and about twice this number of floors. That these floors, as at Jericho, had a short duration is indicated by the archaeological evidence. There is evidence of the same heavy rainfall and of the same necessity for frequent reconstruction. Unlike the early structures at Jericho, the walls were commonly constructed of stone to a height of about one meter, evidently indicating a more ready availability of this material. However, unless one wishes to assume that the structures were used only for sitting or lying down, it must be presumed that the walls above one meter in height were also constructed of mud as at Jericho. But this only emphasizes the probable short life of the structures. The number of building levels is much less (9 for the 30 foot rise), but this suggests only that it was the foundations that did not require as frequent reconstruction as did the mud walls above.[28]

> . . . There was no trace of mortar in setting the stones: "dry walling" seems to have been the method of building throughout all these low Levels, a fact which is surprising at first sight, as the use of clay for pottery-making was already understood. Consideration suggests, however, that in a climate subject to heavy winter rainstorms, a wall built "dry" with stones solidly placed in equilibrium and then packed superficially would probably prove more durable than one built with thin rounded stones set in mud, which, however tenacious, would inevitably melt away when exposed to driving rain for any length of time.

The very fact that the occupants had the know-how for making pottery, but did not use this knowledge in the erecting of these foundations suggests that conditions did not permit taking this type of precaution. More solid houses, as at Jericho, do not appear until later levels (Level XXVI being the first), and even these continued to be constructed by means of dry-walling. A gradual diminution of the severity of the climate is indicated, just as in the later phases of the predynastic period at Jericho.

Levels XXIV to XII may be roughly correlated with the period of Pottery Neolithic A and B at Jericho and less precisely with the era of the constructions of the gabarbands in Jhalawan when the rain was still adequate for impounding water during the rainy season, but late enough for the development of a sizable population. The evidence of similarity of conditions at Jericho, in Mesopotamia, and at Mirsin in Anatolia, together with the fact that the entire period of the predynastic may be traced in the archaeology of Jericho, permits the deduction that the evidence at Mirsin may also be interpreted within the limits imposed by an allowance of not more than two centuries.

VII. Anomalies in the View That the Predynastic Period Had a Duration Measured in Millenniums

On the negative side of this problem is the fact that the view which supposes that this dynastic period is measured in a plurality of millenniums is characterized by some anomalous situations. On the basis of results from C-14 dating, a difference of a full millennium was deduced between the sanctuary on bedrock at Jericho and the appearance of the Pre-pottery Neolithic culture. An additional thousands years was assumed between this and the inventions of pottery by the Pottery Neolithic group. Yet these earliest occupants were able to bore a hole in stone to a depth of two and one-half feet, and shortly thereafter, build a tower that represented "an amazing bit of architecture" for the era involved. Even the Pre-pottery Neolithic people possessed vessels of limestone "finely worked and carefully finished." At Ghassul, dated half a millennium back into the Chalcolithic Period, was found a highly intricate fresco painting (See Plate III) which was recognized as an accomplishment not matched at any time during the succeeding millenniums. Commenting on this find, Albright wrote.[29]

> . . . It is a striking fact that the art of painting elaborate geometric designs reached a higher pitch of achievement in the 4th millennium [*sic*] in Palestine, Syria, and Mesopotamia than it did for thousands of years thereafter.

The writer has gleaned a host of expressions of surprise, astonishment, and amazement at the cultural level revealed by the productions of these early peoples. How much more credible is the view that the major factor determining rate of progress was not "geologic time" required to evolve a mental or physical competence, but rather the untoward climatic conditions with which man had to contend. The abilities were there from the very beginnings of Mesolithic man, who should be recognized as descending immediately from the sons of Noah. The production of more massive works awaited primarily the necessary multiplication of the population for their undertaking.

The predictions of Budge, written some 65 years ago, based on this concept of estimating elapsed time by the demands of the "geologic time scale," are of major significance in this connection. It is suggested that the quotation from Budge, as given in a previous volume,[30] be reread against the background of the comments here made. His predictions of the survival of chronological deductions based on such reasoning have not materialized. It is high time that the geologic time scale be abandoned (as a basis for estimating the duration of the early phases of man's history) in favor of the more realistic view provided in Scripture.

Another large factor that has contributed to the highly inflated chronology of Egypt, both dynastic and predynastic, is the deep-rooted tendency on the part of scholars to give first preference to concepts that recognize kings, dynasties, and cultures as representing sequences. Miss Kenyon, though an avid disciple of current philosophical views, leaves the following words of caution:[31]

> . . . In trying to fit into place the cultures these communities represent, we should learn a lesson from the progress of research in European prehistory. Earlier European scholars tried to place each culture observed into a regular sequence. Now it is recognized that many cultures represent regional developments, and several may have existed side by side. The older sequence method tended to produce very inflated chronologies, which have had to be considerably reduced now that the picture has become more coherent. This we should bear in mind in trying to piece together the jigsaw puzzle which our present state of knowledge in Palestine represents, and in fact some of the new pieces of the jigsaw which almost every year emerge from the ground do suggest that the whole picture will eventually portray a number of groups of people living side by side each with their own distinctive culture, but with just enough links with other groups to suggest contemporaneity.

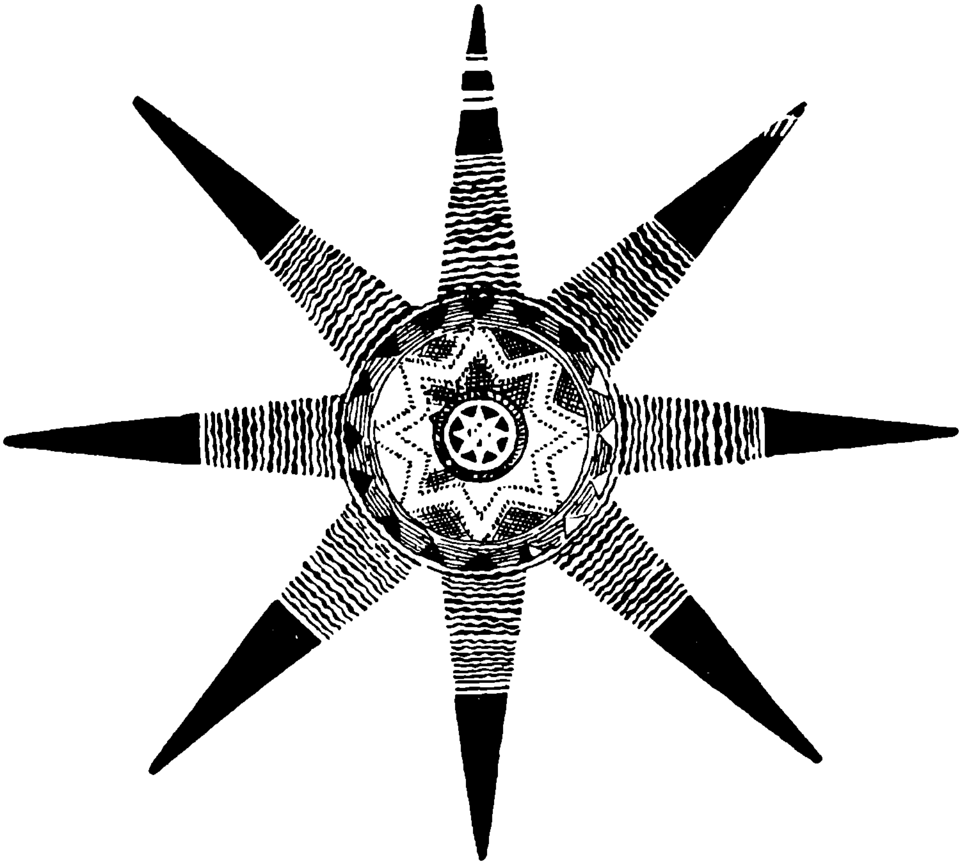


Plate III. The Polychrome Fresco from Ghassul

While a good start has been made in this direction in the recognition of the parallelism of culture at various sites in Mesopotamia, undoubtedly, with further investigations still other cultures will appear which also belong parallel to one or more of these, but for which there may be no clear evidence of such contemporaneity. Not only so, the figures for the duration of these cultures again represent estimations based on the geologic time scale when there is no final evidence to contradict actual periods of far shorter duration. That the lesson suggested by Miss Kenyon has not been well-learned is indicated by the insistence of some that a full millennium must be inserted between the end of Neolithic at Jericho and the beginning of Early Bronze to make room for the Chalcolithic period observed at Ghassul, Mersin, and elsewhere. The fact that the use of copper is not indicated archaeologically in Palestine for the entire period of Early Bronze makes such a supposition totally unnecessary. Chalcolithic is but a local phase at specific sites, falling entirely within the period of Neolithic and possibly extending into Early Bronze of Palestine.

Notes and References

(1) K-AHL, p. 36. (2) A-AP, p. 71. (3) K-AHL, p. 68. (4) *Ibid.*, p. 56. (5) K-DJ; K-AHL. (6) K-AHL, p. 39ff. (7) Chap. III. (8) H-H, p. 104. (9) G-OSJ, p. 90. (10) *Ibid.*, pp. 89, 90. (11) Cited in V-EU, p. 95. (12) P-PI, pp. 67-70. (13) A-AP, p. 69 (14) Gen. 13:10. (15) P-PE, p. 46. (16) K-AHL, p. 39. (17) C-SH, p. 6. (18) K-AHL, p. 31. (19) *Ibid.*, pp. 30, 31. (20) BASOR, No. 79, p. 12. (21) G-SJ, pp. 57, 58. (22) W-FK, pp. 25, 84. (23) P-PE, pp. 1-3. (23a) K-AHL, p. 32. (24) P-PE, p. 5. (24a) The bases for these time relationships between these various cultures are provided in P-CAEM. (25) K-AHL, p. 97. (26) See correlation chart of P-PI, p. 65 (26a) G-PM, p. 11. (27) *Ibid.* (28) Ibid., p. 14. The deduction is based on the similar evidences of heavy rain, rapid growth of the mound, and the instability of the dwellings on exposure to the elements. (29) A-AP, p. 67. (30) B-BEC, Vol. IX, pp. 3, 4; quot. of ref. 1, Chap. XI, Vol. I. (31) K-AHL, p. 69.

CHAPTER IX

THE PREDICAMENT IN ARCHAEOLOGICAL INTERPRETATIONS AT SHECHEM

The archaeological problems at Jericho and at Ai have been considered in a previous volume,[1] as have also the problems relative to the placement of a number of incidents of Israelite history in the chronology of Egypt. A number of other sites in Palestine represent major problems of archaeological interpretation. Notable among these are the problems rising from the archaeology of Shechem.[2]

> Numerous problems still defy convenient solution, among them Jericho, Ai and Shechem.

Attention is thus turned to the site of ancient Shechem to determine the nature of the difficulties there. If these difficulties are also provided ready solutions by the same chronological revision that has provided solutions to the many problems introduced in a previous volume, then we have still further evidence in support of the general correctness of the proposed revision of Egyptian chronology as outlined in Volume I.[3]

I. Geography

The ancient site of Shechem lies about 40 miles north of Jerusalem in the southern part of the territory assigned to the half tribe of Manasseh.[4] It is very near the center of Palestine from east to west and from north to south. This location and its position in the valley between two mountains made it an excellent location for a capital. The location was selected by Jeroboam, the first king of Israel following the division of the monarchy.

II. Shechem in Scripture to the Time of the Conquest

While the town of Shechem is mentioned from the time of Abraham and Jacob,[5] no information from these early references is provided in Scripture which would enable us to fix archaeological finds in terms of Old Testament history beyond the fact that the site was occupied in the time of the patriarchs. At that time, the town may have been a relatively small village occupying but a fraction of the area later covered by the walled city. Strangely, the accounts of the conquest of Canaan by the Israelites in the Book of Joshua are silent about any conquest of Shechem; the name does not appear in the lists of conquered cities, a point of significance in the later discussion.

This situation is commonly interpreted to indicate that the area was already in the hands of either earlier Israelite migrants into the territory or in the hands of friendly peoples who did not interfere with the conquest.[6] Shortly after the initial phase of the Conquest, the Israelites assembled at a point near this site without any indication, in the record, of interference on the part of the local inhabitants.[7] This situation has been interpreted as support for the theory of a split Exodus and of a gradual conquest over an extended period of time, in contrast to the rapid initial phase of the conquest of the territory as indicated in Scripture.[8] The fallacy in this assumption will become apparent as the discussion proceeds.

III. Abimelech's Destruction of Shechem

The earliest incident recorded in Scripture, that is of significant assistance in unraveling the confused interpretation of the archaeology of the site, belongs to the late period of the judges in the rule of Abimelech. The details of this story are recorded in Judges 9 and are not reviewed here other than to note that Abimelech laid siege to the city when the citizens revolted from his rule in a belated protest against his act of murdering all save one of his 70 brothers in order to usurp the judgeship. At this time, the city was completely destroyed.[9]

> And Abimelech fought against the city all that day; and he took the city, and slew the people that were therein, and beat down the city, and sowed it with salt.

From other portions of the record, we are told that the city was protected militarily by a wall, access to the city being through a city gate. Unlike the stone or brick construction used in city walls, the gates must be made of wooden beams to permit their opening and closing. The fortifications of the city also included defense towers. Since the wooden gates were the most vulnerable part of the defense system, such defense towers commonly were constructed in the area of the city gate to provide a vantage point for defense of the entrance. In the Shechem story, the men to whom were given the responsibility of defense of the gate by means of the tower fortifications are referred to as "the men of the tower."[10] When it became apparent that the defenders were no longer able to hold the defense tower against Abimelech and his attackers, they took refuge in what is called "an hold of the house of the god Berith,"[11] an expression which has served as the basis for interpretation of the archaeology of the site.

We are not told whether this point of refuge was associated with the tower or whether it was even inside the city. Logic would suggest that since escape from the city at this time could be so readily prevented by the attackers at the gate, this hold must have been within the city and associated with the temple of this god. This concept was shared generally by the investigators. This deduction was apparently confirmed by the discovery of the remains of a massive temple-like structure within the city wall.[12] The walls of this structure were nearly 17 feet thick at the foundation and obviously represented a defense structure comparable to that of the wall of the city, but on a smaller scale. So obvious was this identification with the "hold" mentioned in Scripture that it was regarded as a "must."[13]

IV. King Jeroboam I Rebuilds the City

Jeroboam I was the first king of the northern kingdom of Israel following the division of the monarchy on the death of Solomon. Thiele dates the reign of this king 931-910 B.C. The chronology of the judges cannot be so accurately fixed for the rule of Abimelech.[14] However, it is relatively certain that the date cannot be earlier than about 1200 B.C., and a date in the era of 1150 B.C. would seem more probable. More recent dates have been suggested. The city destroyed by Abimelech thus lay in ruins for about two centuries from the time of Abimelech to its rebuilding by Jeroboam, who made it his capital. It has been inferred from the reading of I Kings 14:7 that Jeroboam moved his capital from Shechem to near-by Tirzah during his reign. This is not improbable and, if correct, might be revealed archaeologically by evidence of deterioration in the importance of the site of Shechem following this rebuilding.[14a]

V. *The Later History of Shechem*

The Assyrian armies ravaged much of the territory of Israel in the 8th century B.C., culminating in the capture of the capital, then located at nearby Samaria.[15] The fate of Shechem at this time is not stated in Scripture, and Josephus adds nothing to shed further light on the question. The city was certainly inhabited at the time of Jeremiah after the fall of Judah to the Babylonians at the beginning of the 6th century.[16] It is possible that archaeology might provide information as to whether the conquest by Assyria or by Babylonia resulted in the destruction of the city.

VI. *Shechem in the Extra-Biblical Texts*

Several ancient extra-Biblical texts are believed to refer to the city of Shechem though serious questions may be raised to each of these identifications. Since certain archaeological interpretations hinge on the validity of the assumptions involved, these texts are noted briefly. One of the earliest of these is of Egyptian origin and belongs to a collection known as the Execration Texts.[17] These brief inscriptions, made on figurines or vases, carry the names of certain Asiatic sites which were presumably under the domination of Egypt at the time. These names are accompanied by what is thought to be a magical formula for bringing to naught any rebellious uprising at the given site. This was accomplished by breaking the vase or figurine while repeating the magical incantation. At least, this is the manner in which the inscriptions are interpreted.[18] These texts have been variously dated from the 21st to the 19th centuries B.C. By the currently accepted views on the chronology of Egypt, the era is that of the XIIth or, less probably, the XIth Dynasty.

There remains considerable question as to whether the name on one of these figurines is that of Shechem.[19] The name has been vocalized variously as Skimi, Skammi, Sakamami, or Sakmemi. Even if the questionable identification is granted, the inscriptions provide no information which could be confirmed archaeologically beyond the occupation of the site at the time of the XIIth Dynasty.

A second text, believed to refer to Shechem, and from about the same era as the Execration Texts, is found in the Khu-Sebek inscription from the reign of Sesostris III of Dynasty XII. The significant portion of the inscription has been thus translated:[20]

> His majesty proceeded northward to overthrow the Asiatics. His majesty reached a foreign country of which the name was Sekmen. His majesty *took the right direction* in proceeding to the Residence of life, prosperity, and health. Then Sekmen fell, together with the wretched Retenu.

It would appear that the Retenu of this inscription (a territory as well as a people) belong to the territory of western Asia, probably within the area included by Palestine and Syrophoenicia. Any more exact location remains a matter of speculation and debate. There are also philological difficulties in recognizing Sekmen as the Egyptian equivalent of Shechem.[21]

> . . . The philological difficulties in the way of identification are very great. . . .

The name does not occur in the city lists of either Thutmose III or Sheshonk I. The absence of the name is regarded as "remarkable" by one commentator.[22] The Amarna Letters (currently dated in the 14th century B.C., but in the 9th century by the proposed revision) contain a single reference to a site transliterated as *Shakmi* which is believed to have reference to Shechem.[23] Again the identification remains questionable.

In the face of these uncertainties, it must be admitted that the extra-Biblical sources do not provide very significant data of value for interpreting the archaeology of the site. The reference of Josephus to the destruction of the site by Hyrcanus (c. 100 B.C.) provides a solid starting point, but this is of little or no value in settling the debatable problems in the interpretation of the earlier archaeology of the site.

VII. The Archaeological Examination of the Shechem Site

The early investigations at Shechem up to the year 1934 were under the direction of German workers of whom Sellin was the leading figure.[24] The site then lay dormant until 1956 when a joint group from Drew University and McCormick Theological Seminary resumed investigations. Work by this group continued through the years 1956-61. The results of these investigations were duly reported in issues of

The Biblical Archaeologist and in the *Bulletin of the American Schools of Oriental Research.* These reports were followed by a volume entitled *Shechem* by G. E. Wright, Director of the campaigns. The pertinent archaeological observations at the site are here reviewed.

VIII. Observations from the Hellenistic Period

Observations by the early German workers and confirmed by the Drew-McCormick group revealed that the upper levels at the Shechem site belonged to the Hellenistic period and later (331 B.C. and later). This was evidenced by the pottery types and by the discovery of a number of datable coins from this era. The debris from the final destruction of the city by Hyrcanus (c. 100 B.C.) were clearly discernable.[25]

IX. The Presumed 400-year Gap Preceeding the Hellenistic Period

Sellin reported finding immediately below the Hellenistic levels, occupational strata from the Iron Age which, in line with accepted dates provided by the pottery dating scheme, he regarded as Israelite. The Drew-McCormick group confirmed these finds from Iron I and, following current opinion, assigned these strata to the era of the Israelite Monarchy ending c. 721 B.C. No remains were found to fill the gap between the fall of Israel and the Hellenistic period four centuries later.[26]

> . . . Thus far in the two seasons we have found no clear evidence of any occupational debris at Shechem between the eighth and fourth centuries B.C.

This situation continued to hold to the end of the investigations as indicated in the 1963 report.[27] Thus an occupation gap must be assumed at Shechem for these four centuries between 721 and c. 330 B.C. Yet Scripture indicates that Shechem *was* occupied after the fall of Jerusalem in the early 6th century.[28]

> That there came certain from Shechem, from Shiloh, and from Samaria, even fourscore men, having their beards shaven, and their clothes rent. . . .

The discrepancy has been explained on the basis that the men referred to by Jeremiah were making a nostalgic visit to a city that no longer existed.[29]

> From the time of Samaria's fall until the fourth century, then, Shechem was not a great city. Jeremiah's reference to men from Shechem, Shiloh, and Samaria who fell victim to Ishmael's brutality (Jer. 41:5) doubtless refers to pilgrims coming from a nostalgic visit to once-proud cities now hardly worthy of their great names of yore.

X. *The Massive Temple*

On the western part of the mound site, Sellin discovered the remains of a massive structure measuring 68 by 84 feet with walls 17 feet thick at their foundations. Sellin regarded the structure as having served as a temple. Others disagreed.[30] What possible reason could be supposed for constructing a temple with walls 17 feet thick? Scripture provided a reasonable answer. This was the structure referred to in the story of Abimelech as the "hold of the house of the god Berith," to which the men of the tower fled when they were no longer able to hold the tower against the besiegers of the city. Further evidence of this identification was seen in the discovery of a similar structure at Megiddo which, from its archaeological stratum, was given a life between 1400 and 1200 B.C., the latter date approximating an acceptable date for the Abimelech story. In spite of the objections raised to the identification of the structure as a temple, Wright noted convincing evidence for the correctness of this position, and with this position, the writer concurs.[31]

> Consequently, there seems to be no need for further quibbling. The evidence from the court shows that two sacred standing stones and an altar are almost as old as the building itself. It is therefore a temple, and was originally built as a temple.

However, continued investigation called for a revision of the date for the *origin* of the temple at Shechem to the era 1650-1600 B.C., a date later refined to c. 1650 B.C. This was the same date given to the building of the city gate on the east of the city. Since the date falls in the period of Hyksos domination of Egypt by current views, the general belief that the Hyksos also governed an empire including all of Palestine, led to an attribution of the origin of these structures to the Hyksos.[32] The date for the *destruction* of the temple could not be ascertained from any evidence from the temple area, but logic associated the destruction with that by Abimelech according to the Scriptural account.[33]

> When the temple was destroyed or abandoned could not be determined with certainty, but nothing indicates that the destruction did not take place in the time of Abimelek as Judges 9 suggests.

An alternate interpretation was expressed by Bull, field superintendent at the temple area, following the 1960 campaign.[34]

> This massive structure [Temple I] was destroyed at a date which cannot be accurately fixed from the evidence available within the temple, but which probably coincided with the general destruction of the city attested at the East Gate and in Fields III and VIII, about 1550 B.C.

The date suggested by Bull was obviously too early to permit identification of the destruction of the temple as that by Abimelech; actually the date is three hundred years before the Conquest in terms of the more popular setting of the Exodus. It is to be noted that the difference of opinion among the investigators was not confined to the problem of whether or not the structure was a temple; the difference of opinion now had to do with whether or not this structure was that of the Abimelech story At the time of the first campaign, Wright as director, regarded such an identification as unequivocal, evidently based on the remarkable agreement with Scripture and the absence of any other destruction or structural remains that could reasonably be thus identified.[35]

> This structure, some 21m. long by 26m. wide, had walls *ca.* 5.30 m. thick, the thickness of a city fortification; it must surely have been the temple of *ba'al berit* . . . mentioned in the Abimelech story.

This conviction was retained by Wright as late as 1961 following the 1960 campaign, for he then wrote:[36]

> The temple on the city's western side, together with its immediate surroundings, is referred to as Field V. This great structure, which must certainly be identified with the "house of Baal-berith" . . . was completely unearthed by Sellin in 1926.

The crux of the problem then lies with the proper dating of the destruction of this massive structure, which so neatly meets the specifications of the Abimelech story. Do the archaeological observations at Shechem permit a dating of the destruction of this structure in the 12th century, to agree with a necessary dating of Abimelech, or do the observations demand a dating in the 16th century, as proposed by

Bull? If the latter is the case, then an identification of the structure as that destroyed by Abimelech is out of the question, at least within the framework of current views on ancient chronology. As admitted by both Wright and Bull, there was no evidence within the temple to provide an answer to this question. The evidence must be derived from the findings at the East Gate.[37]

XI. *The Violent Destruction of the East Gate Area*

The area of the East Gate was chosen by the Drew-McCormick group for investigation in the First Campaign in the summer of 1956.[37a] Digging in the area of the south tower, archaeologists soon encountered pottery sherds and below them found evidence of burning. The pottery associated with this burning permitted an approximate date c. 800 B.C. (by current views) and hence belonged to a much later period than the violent destruction at the time of Abimelech. This burning was attributed to the Arameans on the basis of II Kings 13:3, 22, though the verses make no mention of any destruction of cities. These verses read:

> And the anger of the Lord was kindled against Israel, and he delivered them into the hand of Hazael king of Syria, and into the hand of Benhadad the son of Hazael, all their days.
>
> . . . .
>
> But Hazael king of Syria oppressed Israel all the days of Jehoahaz.

The *origin* of this phase of the tower was thus attributed to Jeroboam I (931-910), who is recorded as having rebuilt the city.[38] Further digging revealed evidence of an earlier and more violent destruction of the tower. In the report of the first campaign, Wright commented:[39]

> . . . The tower was violently destroyed and the guardroom filled with burned brick, charcoal, broken jars, dishes and rubbing stones for grinding grain, pestles and the bones of at least three different people, all mixed in wild disorder so that little could be pieced back together again. The pottery dates from the period called "Middle Bronze IIC;" it is clear that the destruction was a very violent one and the evidence points to the Egyptians as the cause.

It is thus clear that Wright recognized that the violent destruction of the *tower* occurred in Middle Bronze IIC, datable by current chronological views in the 16th century B.C., and thus could not represent the destruction of the city by Abimelech. The question that remained unanswered was whether or not the massive temple structure was destroyed at the same time as this violent destruction of the area of the East Gate. In the course of the 1957 campaign, evidence was obtained of violent destruction by burning in two other areas (Field I and Field III).[40] But this still did not prove that the destruction of the massive temple was part of this destruction in the 16th century. The possibility remained that the massive temple survived this 16th century destruction and remained in use until the era of Abimelech.

But if this assumption were to be considered permissible, then there should be archaeological evidence of an additional and later destruction between Middle Bronze IIC, in the 16th century, and the much later destruction c. 800 B.C.[41] After all, the Abimelech story emphasizes the total and complete destruction of the *city* with only incidental mention of the burning of the roof over the heads of the people who had gathered in the hold for refuge.[42] If the massive temple survived the violent destruction of the 16th century, it is most difficult to assume that the later total destruction of the city by Abimelech, including that of the massive temple, was any less violent than that in the 16th century. Certainly such a destruction should at least be clearly marked archaeologically. Since the end of Middle Bronze IIC had been assigned a date c. 1550 B.C., this additional evidence of destruction should appear late in Late Bronze or in Early Iron, since the transition to Iron I is given an approximate date c. 1200 B.C. Wright and others of the investigators held out to the close of the investigations for associating the destruction of the massive temple with Abimelech's time,[43] evidently in the belief that a further examination and more thorough study of the reports would confirm, or at least leave open, the possibility that this massive structure survived the 16th century destruction. That others of the group disagreed is indicated by the report from Locus 3 on the site.[44]

> . . . In Locus 3, for example, there were at last five LB earth floor levels, one below the other, . . . Above this series of floors there were 30 cms. of gray clay with bits of charcoal, plaster and brick, but such traces of burning were much too slight to attest any violent or general destruction at the end of LB. . . . Furthermore, ***there is no evidence whatever of a violent·distrubance in the 13th or 12th centuries***, such as is found in southern sites and at Hazor in Galilee. [Emphasis ours.]

The same peaceful transition is found in the only other areas on the site where these strata have so far come to light (Fields III and VI). A similar situation was observed in the area of the East Gate.[45]

> . . . The Late Bronze city once ruled by Lab'aya [*sic*] and his sons never suffered a destruction as did Lachish, Bethel, and Hazor. Rather there is a smooth and apparently peaceful transtion from the Late Bronze Age to the pre-Philistine Iron Age (Iron IA). This is especially apparent in one of the guard rooms of the late Bronze *East Gate*. ***Here we found five levels*** [compare with quotation of reference 44] ***of late Bronze floors superseded, without an intervening destruction layer, by no less than fourteen superimposed Iron I floors.*** [Emphasis ours.]

Certainly these fourteen superimposed floors of Iron I take us far enough into the Iron Age to allow the conclusion that there are no indications of any significant destruction of the site that can be equated with the total destruction of the city at the time of Abimelech. However, there were other data that seemed to leave the door slightly ajar, at least sufficiently to allow for a compromise solution.

XII. The Granary and the Intermediate Temple

In the course of the earlier investigations by Sellin and colleagues, the remains of a later structure were found above (and hence later in time) the remains of the massive temple. The pottery in association with this structure permitted a date for its destruction c. 800 B.C. This allowed, in turn, an assignment of origin by Jeroboam I as part of his reconstruction program and use of the site for his capital.[46] However, it became apparent that the structure was very probably used as a granary, which, in the absence of any evidence of a palatial structure during the life of the building, left the interpretation notably short of convincing. At the time of this discovery of the granary, no evidence was observed to indicate occupation of the site between the destruction of the massive temple and the construction of the granary.

In the report of the 1960 campaign, Bull described the discovery of the remains of a hitherto unsuspected temple *above* those of the massive temple, but *below* those of the granary.[47] The foundations of this intermediate structure, which apparently had also been used as a temple, sat in earth which contained Late Bronze pottery indicating an origin in Late Bronze.

> While the walls of the granary were being removed and examined, it became evident that there were remains of the walls of another structure directly below them but above the Middle Bronze temple walls. These walls beneath the granary. . . . sat in earth which contained Late Bronze pottery.

This discovery demonstrated rather conclusively that the massive Middle Bronze temple did *not* survive to the time of Abimelech. The massive temple must have come to its end prior to the erection of this intermediate temple which still belongs to Late Bronze. Thus the door was closed to the retention of the identification of the massive temple with that of the story of Abimelech. But at the same time it opened slightly another door. Perhaps it was this intermediate temple that should be identified with the story of Abimelech. Cambell associated the discovery with observations made elsewhere on the mound and commented in the 1960 report as follows:[45]

> . . . At the highest point was a thick layer of Iron I debris; like the other remains from this period found now at four places on the mound, . . . this debris contains pottery closely associated in type with that of Late Bronze and *no Philistine pottery at all.* This is a very important datum because of the light it throws upon the events described in Judges 9. The attempt of Abimelech to establish himself as king centers around Shechem, where he received support from those of the temple of Baalberith (9:4) and "the house of Millo" (the house of the "fill" and now certainly shown to be the same building — 9:6). Later, enmity developed between the Shechemites and Abimelech, and in this part of the narrative Abimelech is reported to have destroyed the people of Shechem and finally their last-ditch stand in the "tower" (9:46ff.), still another reference to the main temple-citadel building whose investigation is described by Professor Bull below. Now it appears that we have mounting evidence for placing these events early in the Iron I period, probably in the first half of the twelfth century; *after this period, there is no evidence of occupation before that of the ninth century or thereabouts.* Here, then, is the first external evidence bearing directly on a date in the chaotic period of the Judges. [Emphasis ours.]

This is the general position adopted by Wright in his volume appearing after the close of the investigations and entitled *Shechem.* The writer is unaware of the degree to which Wright recognized the extremely fragile nature of this revised interpretation. Statements in the foreword to his volume suggest that he was not altogether happy with the turn of events which required the acceptance of this interpretation which would make this intermediate temple the one belonging to the city destroyed by Abimelech.[49]

> . . . In this area we can seldom work with certainties. Instead, it is necessary to construct hypotheses which always possess greater or lesser degrees of probability. The truth in them rests upon their ability to interpret and hold together a variety of disparate data, but new information at any moment may make it necessary to change a given hypothesis, or cause a scholar to express it somewhat differently. It is to be hoped that the fresh hypotheses set forth herein will be found by readers to have been put together with care, or, if at any point found weak or unacceptable, will stimulate further consideration of the problems and perhaps fresh answers.

Wright summarized his altered position in a few brief paragraphs from which we quote:[50]

> That Temple 2b was destroyed is indicated by the fact that the cella of the temple was disturbed by numerous pits dug through the last floor, some of them going deep into the fill below the lowest of the floors. All were filled with gray-black earth taken from occupational debris, and all were sealed over by the thick cement floor of the Israelite warehouse [granary]. Hence it is quite certain that the pits were dug after the temple's destruction and before the erection of the Israelite building. The latter, as we shall see, could not have been built before the second half of the ninth century. In the pits there was a great deal of carbon and quantities of Iron IA (*ca.* twelfth century) pottery.
>
> The logical conclusion is that the charcoal and quantities of twelfth-century pottery found in these pits must have come from a twelfth-century destruction of the city.

XIII. Weaknesses in the Interpretation

While some of the deductions from the observations seem reasonable against the background provided by popular chronology, others are open to severe question, the reason being that the chronological background is not correct. The intermediate temple does not provide the evidence to be expected of a "hold" that would serve as a refuge for the people, as is true of the massive structure. There is a grave question whether the observations permit the conclusion that there was a total destruction of the city at this time as stated in Scripture. A previous conclusion, based on observations at the East Gate, was that the Late Bronze city never suffered a destruction.[51] Certainly one of the first places where such a total destruction would be apparent would be in the towers, yet in the south tower there was observed an uninterrupted sequence of floors beginning in

Late Bronze and extending deep into Iron I, providing evidence that the Late Bronze city was *not* thus destroyed. Of far greater significance is the absence of any significant evidence for the rebuilding of the city by Jeroboam. Certainly, if he used the city as his capital, there should be more evidence of this than the granary. The report relative to this problem reads as follows:[52]

> Regarding the *repair* of the city's fortification by Jeroboam I (*ca.* 920 B.C.; I Kings 12:25), only the following can be said. (A) Such evidence as was discovered in 1957 simply confirmed our interpretation of 1956 of the *repair* of the south guardroom in the East Gate, Field Areas 3 and 4, particularly on the basis of I.3, Locus 1. (B) The new data of 1957 showed that the repair was *nothing more than a patching* which otherwise simply made use of the LB-Iron I reconstruction described above. It represents very poor workmanship that easily crumbles away when exposed to the weather. (C) this *repair* was also visible on the north side of the gate (See Plan), where the same poor earth-filled wall had been erected on top of the main MB tower wall as it ran east-west, connecting the two entries of the gate.
>
> The period of the Israelite Divided Monarchy is represented at the East Gate only by two isolated pockets of pottery dating mainly from the 9th-8th centuries B.C. These were found in a lime-filled layer which formed the fill of a *shoddy repair* along the east wall of the LB-Iron I construction, and which underlay a rough buttress thrown up to support a shaky corner of the building. *This,* supporting the stronger evidence [sic] found in 1956, *is all we have thus far for Jeroboam's "building" of the city.*[Emphassis ours.]

XIV. Wright Was Right in His Earlier Writing

When these problems are viewed against the background provided by the proposed revision in Egyptian chronology, there is no necessity at all for deviating from the conclusions regarded by Wright as a *must* in the earlier phases of the investigations at Shechem.[53] The same revision that provided solutions to the problems of the Exodus, the Conquest, the Oppression, the Famine of Joseph, the problems at Jericho and at Ai, the problems related to the Hittites and to numerous others, also provides a most reasonable solution to the problems at Shechem.

Most certainly, the massive temple is to be identified with that of the Abimelech story which served as the "hold of the house of the god Berith," which identification was regarded as obvious and above question when the structure was first discovered. Bull was also correct in associating the destruction of this temple with the evidences of a violent destruction of the city and its fortifications at the East Gate, and assigning this destruction to the era of Middle Bronze II C, as is so clearly evidenced by the associated pottery sherds. The date however is not 1600-1550 B.C. When it is recognized that the proper background for the Conquest belongs to the end of Early Bronze, then this destruction in Middle Bronze II C is to be correlated with the period of the late judges, and this is where the story of Abimelech is found in Scripture.

The rebuilt city to be attributed to Jeroboam then includes the intermediate temple and the rebuilt towers at the East Gate. This is the city referred to by Toombs in his report.[54]

> . . . After the Egyptian [*sic*] destruction, a *complete rebuilding job was required* and walls and guardrooms went up on *a new line of defense*. Although neither as massive nor as well made as their predecessors, they were nevertheless the result [of] a strong, highly organized community effort. . . . The stratification in the guard-rooms of the East Gate shows a striking continuity between the Late Bronze and the Israelite [*sic*] occupation. Pottery types changed gradually with no conspicuous breaks and there was *no evidence of violent destruction*. [Emphasis ours.]

The destruction of the intermediate temple which belongs to this city is of Iron IA. It is this city for which Wright's theory must assume a violent destruction to be attributed to Abimelech. The absence of any evidence of such later destruction may be explained on the basis that the city was abandoned (either suddenly or gradually) when Jeroboam moved his capital to Tirzah.[55] It could be expected under these circumstances that anything usable in the city by way of building materials would be salvaged for other structures; hence, the evidence of debris of the city was far short of that to be expected from a violent destruction.[56]

The hiatus in the occupation of the site revealed archaeologically between the violent destruction and the rebuilding is that between the time of Abimelech and that of Jeroboam I. The assumed 400-year gap in the occupation between the Israelite period and the Hellenistic era is then largely closed. What has been called Israelite is Israelite of the Assyrian, Babylonian, and Persian periods.

A further problem is provided a tentative solution. Scripture does not record the conquest of Shechem at the time of Joshua. The earliest remains thus far noted on the site have been dated c. 1800 B.C.[57] The date by the revision is c. 1400 B.C. These finds are then of Israelite origin indicating that the site was not more than locally occupied, by a limited population, at the time of Joshua and required no conquest. More comprehensive investigation of the site may reveal evidences of such a minor occupation. The city was evidently rebuilt by the Israelites as one of the cities of refuge.

Notes and References

(1) Vol. I, Chaps. V and VI. (2) W-BA, p. 83. (3) See Fig. 2, Vol. I. (4) The site is also near Samaria, the capital site of Ahab. (5) Gen. 12:6; 33:18. (6) R-FJJ, p. 3; K-AHL, p. 208; BA, Vol. XX, p. 13; *Ibid.*, Vol. XXVI, p. 11. This concept constitutes the basis for the "split Exodus" theory. See ref. 8. (7) Josh. 24:1. (8) Vol. I, Chap. IV, Sect. XI. (9) Jdg. 9:45. (10) *Ibid.*, vs. 46. (11) *Ibid.* (12) BASOR, No. 144, p. 9; see quots. of refs. 34-36. (13) *Ibid.* (14) Vol. I, Chap. II. (14a) See last paragraph of this chapter. (15) II Kings 17:5ff. (16) Jer. 41:5. (17) Translations of some of these texts are given in P-ANET, pp. 328f. (18) A-AP, p. 83. (19) BA, Vol. XX, pp. 3,4. (20) *Ibid.* (21) P-EOT, p. 40. (22) BA, Vol. XX, p. 4. (23) P-ANET, p. 489, Let. 289; SDABD, article "Shechem." (24) This early work was reviewed by Wright (BA, Vol: XX, pp. 20ff.). (25) This destruction is referred to by Josephus (J-AJ, Bk. XIII, Chap. 9, par. I). (26) BASOR, No. 148, p. 24. (27) BA, Vol. XXVI, p. 25. (28) See ref. 16. (29) *Ibid.* (30) W-S, p. 81f. (31) *Ibid.*, p. 87. (32) Vol. I, Chap. XIV, Sect. V; BASOR, No. 148, p. 17; BA, Vol. XXVI, p. 15. (33) BA, Vol. XX, p. 95. (34) BASOR, No. 161, p. 32. (35) *Ibid.*, No. 144, p. 9. (36) BASOR, No. 161, p. 13. (37) See quots. of refs. 33, 34. (37a) BA, Vol. XX, p. 29. (38) I Kings 12:25. (39) BA, Vol. XX, p. 32. (40) BASOR, No. 148, p. 17. (41) See Sect. X. (42) Jdg. 9:49. (43) See quot. of ref. 37. (44) BASOR, No. 148, p. 22. (45) BA, Vol. XXVI, p. 10. (46) BA, Vol. XX, p. 25. (47) BA, Vol. XXIII, p. 114. (48) *Ibid.*, pp. 106f. (49) W-S, p. xiv. (50) *Ibid.*, pp. 101, 102. (51) See quots. of refs. 44, 45. (52) BASOR, No. 148, p. 23; BA, VOL. XX, p. 103. (53) See quot. of ref. 35. (54) BA, Vol. XX, p. 96. (55) Based on the suggestion in I Kings 14:17. (56) See quot. of ref. 48. (57) See ref. 24.

CHAPTER X

CONFUSION IN THE ARCHAEOLOGY OF MEGIDDO

The ancient site of Megiddo was one of the more important fortresses of ancient Palestine. It was located at the foot of the Carmel Ridge and occupied a critical position for the domination of the Plain of Esdralon in northern Palestine. Main roads passed through the site from Babylon in the east and from Egypt in the south. Military possession of the site has been the goal of nations of the East from antiquity to the present time. During the earlier phases of archaeological investigations, the identity of the site of Megiddo remained in doubt. Subsequent investigations at Tell el-Mutessellim made it apparent beyond further question that this was the site of ancient Megiddo. The top of the tell occupies an area of some thirteen acres and represents one of the more thoroughly excavated sites of Palestine at the present time.

I. The Biblical History of Megiddo

The fortress of Megiddo was certainly in existence at the time of Joshua's conquest. While it was not part of the territory actually occupied at that time, it is listed among the cities *vanquished*, and, at some unstated time later, the Canaanite occupants were put under "tribute."[1]

> Yet the children of Manasseh could not drive out the inhabitants of those cities; but the Canaanites would dwell in that land. Yet it came to pass, when the children of Israel were waxen strong, that they put the Canaanites to tribute; but did not utterly drive them out.

The point at which the Israelites took over the site for their own occupation has been a matter of difference of opinion among Bible scholars. From the account in Judges 4:2, the Canaanites were able, after the death of Ehud (the second judge), to assert their independence, and a second conquest was necessary under the judgeship of Barak.[2]

> And the Lord sold them into the hand of Jabin king of Kanaan, that reigned at Hazor.
>
> . . . .
>
> So God subdued on that day Jabin the king of Canaan before the children of Israel. And the hand of the children of Israel prospered,

> and prevailed against Jabin the king of Canaan, until they had destroyed Jabin king of Canaan.

This critical battle was fought near Megiddo,[3] though it is not specifically stated that Megiddo was repossessed from the Canaanites at this time. However, since Hazor, from which Jabin ruled, was located in this general area, and since the battle was fought near Megiddo, this is a logical inference.

Israel controlled Megiddo in the time of Solomon, for it is recorded that he rebuilt the city as part of his refortification program.[4] The subsequent references to Megiddo in the times of Ahaziah and Josiah[5] provide no information of archaeological import beyond the fact of the occupation of the site through the era of the divided monarchy of Israel.

II. Megiddo in the Extra-Biblical Sources

The capture of the city of Megiddo by Thutmose III is described in a pictorial inscription engraved on the walls of the temple of Karnak. The name of the city also appears in the city list of Sheshonk I. This king of Dynasty XXII, by current views, is identified with the Shishak of Scripture who plundered Solomon's temple in the reign of Rehoboam. The anachronisms that rise from this identification have been introduced in detail in a previous volume.[6]

A Stele of Seti I, found at near-by Beth Shan, suggests the occupation of the site by this Egyptian king,[7] though strangely nothing comparable has been found at the more critical site of Megiddo.

III. The Controversy Over the Date for Israelite Occupation of Megiddo

Critical among the difficulties in the interpretation of the archaeology of Megiddo is the problem of locating the point in Israelite history when the site was first completely occupied by the Hebrews. It is to be expected that this point would be marked archaeologically by evidence of a change of culture as revealed by the appearance of new pottery types. It is apparent from the reading of Joshua 17:13, as previously noted, that the Canaanites were permitted to occupy the site for some unstated period of time after the first phase of the Conquest. It is generally conceded that complete occupation occurred at the time of the victory of Barak as recorded in Judges 4.

Albright, however, in his early thinking, did not follow this view,[8] noting that the Biblical account does not specifically state that this was the case. Among those who accepted this as the point of the first Israelite occupation, opinion was further divided as to when in the period of the Judges the story of Barak's victory belongs. It was generally understood, from the position of Barak as 4th in the line of judges, that this was relatively early in the period. Engberg, however, has pointed out evidence which he regarded as demanding that this first occupation of Megiddo by the Israelites belongs much later. A date just prior to the reign of Saul (1050) was suggested.[8a]

The controversy has its basis in archaeological observations at Megiddo. Albright had argued for a position for the initial Israelite occupation between Strata VII and VI, giving the incident a date c. 1125 B.C., a date consistent with the popular dating of the Conquest c. 1225 B.C. His conclusion was based on the appearance of a particular type of pottery, well represented in Stratum VI, but only sparsely so in Stratum VII.

Engberg, however, has pointed out that this position was not tenable, and that the supposed break in culture between Strata VII and VI was not nearly as pronounced as had been first supposed, being represented by only a single new pottery form. A more significant cultural break occurs between Strata VI and V, and at this point there is also evidence of catastrophe.[9]

> . . . There was, in other words, an extensive, not a minor, break in cultural development at this point which calls for explanation.

IV. The Dilemma

With the initial occupation of Israel at Megiddo set between Strata VII and VI and dated c. 1125 by Albright, there remained about 75 years of the era of the Judges for the incidents subsequent to the rule of Barak and prior to the establishment of the Monarchy under Saul. With the supposed necessity of recognizing the occupation between Strata VI and V, this date must be moved forward by about another half century, thus bringing the rule of Barak down to just before the reign of Saul. This places the rule of

Barak contemporary with that of Samuel and half a century or more into the era of the incursions by the Philistines.[10] Evidently Albright recognized the difficulties involved in such a late placement and had expressed the opinion that it was not necessary for Megiddo to have been occupied by the Israelites after the defeat of the Canaanites under Barak, since there is nothing in Scripture to require it. With the presumed necessity for movement of this incident forward by another half century, this phase of the problem was magnified, and one might expect that it would be followed by a general rejection of the concept of occupation following this victory. However, Engberg saw no other point in the written history of Megiddo or in the archaeology of the site for such placement and held out for recognition of the occupation following this victory.[11]

> Fully aware of the Canaanite nature of Megiddo VI Professor Albright has indicated in a letter that it would not have been necessary for Megiddo VI to have been occupied by the Israelites after Sisera's defeat, since there is nothing in Israelite tradition to require it. To the writer [Engberg] there seems every reason to believe that the Israelites occupied Tanaach and Megiddo after Barak's victory, unless we regard the Song of Deborah as a grossly exaggerated account of a trivial incident. This view, we may believe, would find favor with few. . . .

Evidently, the presentation of these arguments were sufficiently convincing to cause Albright to abandon his previous position and follow Engberg in placing the victory of Israel over the Canaanites archaeologically between Strata VI and V.[12]

> In short, I [Albright] am strongly inclined to accept Engberg's chronological modification of my original position.

Thus while the archaeological evidence as traditionally interpreted favors slightly the placement of the first Israelite occupation of Megiddo between Strata VI and V, the Biblical evidence virtually demands recognition of occupation following the victory under Barak. To accept both lines of evidence, the victory of Barak, 4th in the line of the judges, must be moved down just prior to the reign of Saul and contemporary with the judgeship of Samuel, the last of the judges. While Albright felt compelled by the evidence of archaeology to acquiesce to the reasoning of Engberg, he recognized that it would not be easy to defend the chronological placement of the incident this late in the history of Israel.[13]

> . . . If he [Engberg] is right about dating this battle between strata VI and V, we shall have to lower its date to after cir. 1100 B.C., since we can hardly place the fall of Megiddo VI less than a generation after that of Megiddo VII on any theory and since Megiddo VII may not have fallen until well along in the third quarter of the twelfth century. If the events commemorated in the Song of Deborah must be dated somewhere in the early eleventh century, the career of Shamgar of Beth-anath, who defeated the Philistines, must be correlated with the phase of Philistine expansion which culminated in the Battle of Shiloh (cir. 1050) rather than with the earlier movement as I have hitherto inferred. The Song of Deborah and the following careers of Gideon and Jephthah then fall between 1100 and 1050, while the brief reign of Abimelech in Western Manasseh may come down to the last years before Saul's accession to the throne. This telescoping of events does somewhat upset our usual views, but there is no serious historical objection. . . .

Wright, on the other hand, did not go along with the arguments of Engberg and preferred to interpret both Strata VI and V as of Canaanite origin; Judges 1:28 was then interpreted to refer to Israel becoming strong down in the time of David.[14]

> . . . As far as the archaeological contents of the two strata are concerned, it seems to this writer that no convincing argument can be made as to when Israel actually took over the control of the city. . . . In addition, from the Biblical record we infer that the dominant population in any case was Canaanite, since it is said that Israel did not drive out the inhabitants but put them to taskwork . . . when the nation was strong enough (in the tenth century under David and Solomon) . . . Thus both Cities VI and V were probably Canaanite in reality, and the only reason for dating the Song between VII and VI, instead of between VI and V, is that the date of the interval between the latter is much too late, being near the time of Saul.

The problem cannot be divorced from the results of the more recent excavations at Shechem.[15] The massive temple, whose identification with that of the Abimelech story of Judges 9 was earlier regarded as a "must," on later investigation required movement back into the 16th century. This unexpected development forced a shift of opinion on the identification of the temple of the Abimelech story to an identification with the less pretentious, intermediate temple whose foundations lay between those of the massive temple and the granary of the 8th century.[16] The foundations of this intermediate structure rested in soil containing Late Bronze pottery, but no Philistine pottery at all. The period of use of this structure was thus assigned to what was called pre-Philistine Iron I.[17]

But as pointed out by Albright,[18] and reasonably deduced from the sequence order of the judges in Scripture, Abimelech must follow Barak wherever Barak is placed. If it is necessary to move Barak down to the era just before the reign of Saul to meet the archaeological demands for recognition of the point of first occupation of the site by the Israelites, then Barak is half a century deep into the Philistine era [18a] How then can Abimelech be in pre-Philistine Iron I and following Barak? Difficulty thus rises from any interpretation that one may wish to accept, but the one position that is totally out of the question is that which would identify this intermediate temple as that of the Abimelech story and then place Barak down just prior to the era of Saul. But if the interpretation of Wright as to the identity of this intermediate structure is not accepted, then there is nothing on the Shechem site to represent the destruction of the city by Abimelech. If the massive temple is taken as that of the Abimelech story, then either Abimelech belongs in the 16th century, two or three centuries before the Conquest, or else Middle Bronze II C has been misdated on the B.C. time scale by a plurality of centuries. If it is recognized that the Israelites occupied Megiddo after the victory under Barak, which deduction is difficult to avoid, though Wright has chosen this way out of the dilemma, then the shift in expected culture should be revealed between Strata VII and VI, rather than between VI and V. But at this point, the archaeological evidence for a shift in culture is virtually nil. Movement of the point forward to a position between VI and V does little to alleviate this difficulty and at the same time introduces the anachronism previously noted.

The situation is somewhat comparable to that of the creation of the split-Exodus theory to account for the insoluble discrepancies at the time of the Conquest. The theory is in such violent contradiction to Scripture as to require rejection of vast sections of these records as having any historical value, and at the same time the theory is utterly indefensible, as indicated by the fact that no one has been able to suggest reasonable details to fit into the theory. The Biblical accounts relative to Megiddo are not merely "somewhat upset" " by the interpretation of Engberg; the accounts are completely nullified.

The nature of the error involved is clarified as the archaeology of Megiddo is traced through its more complete history. When the data are then set against the background provided by the revised chronology, the entire picture is brought into clear focus.

V. The Archaeology of Megiddo Reveals a Sequence of Twenty Cities

Early archaeological investigations at Megiddo were made by German workers between the years 1903 and 1905. Work was later resumed by Fisher, Guy, and Loud, beginning in 1925 and extending to 1939. The ambitious plan was entertained of excavating the entire mound layer by layer. However, the task turned out to be more involved than anticipated, and, after removal of the top four strata, it was necessary to confine further excavations to more limited areas. Four sections were selected for more complete examination. These were identified as AA in the northern part of the site near the city gate, BB in the eastern sector of the site where the first stables had been discovered, CC at the south, and DD in an effort to join AA and BB. CC was soon abandoned, and DD was not completed. AA was excavated through Stratum XIII. Only at BB was the excavation carried to bedrock. At this point, evidence for a sequence of twenty successive cities was observed. These were numbered by Roman numerals from I to XX, Stratum I representing the surface layer.

More complete reports than those in the ***Biblical Archaeologist*** appeared subsequently under the titles "Megiddo I" and "Megiddo II." The journal reports were brought up to date in 1950.[19] Due to difficulties that arose from attempts to interpret certain data attributed to the time of Solomon, a brief excavation was carried out by Yadin in 1960 in an attempt to clarify what seemed to have been a misinterpretation of previous observations. A report of this later investigation appeared in 1960.[19a]

VI. On the Identification of Megiddo Levels as of 1950

While scholars were not altogether agreed on the dates to be assigned to the various levels at the Megiddo site, the approximate dates representing general and approximate opinion as held in 1950 are outlined in Table IV. In the same Table are given the interpretations of the present writer based on the proposed chronological structure. It will be noted that the lower strata were given positions in terms of the Arcaehological Ages rather than in terms of known historical incidents or kings. There would seem to be little question in the matter of associating the observed pottery with these epochs, since the epochs were defined in terms of these pottery types in the first place.

Stratum IX was the lowest level for which identification was suggested in terms of any particular king. This stratum was attributed to Thutmose III.[20] The identification was based largely on finds of scarabs and other objects dated to the era of this king in a stratum at near-by Beth Shan, the pottery of the stratum corresponding in type with that of Stratum VIII at Megiddo. This identification was taken as the key for tracing the strata above and below; the assignments suggested were based on presumed correlations with incidents to be noted in the written historical records. In Level IV were found the remains of two stable complexes consisting of stalls that could have housed perhaps as many as 500 horses. These were quickly related to the Biblical references telling of the numerous horses and chariots which formed part of the defense system of Solomon, who is stated to have rebuilt Megiddo[21] and to have stationed chariots in certain unnamed cities.[22]

With Stratum IV identified as that of the era of Solomon, it was more or less a matter of formality to identify Stratum V with the time of David and VI from the time of Saul. These assignments seemed to be confirmed by the presence of a foreign type of pottery in Strata VI and VII, which was regarded by some as of Philistine origin, since the Philistines were known to have occupied near-by Beth Shan at the time of the death of Saul.[23] Strangely, however, no pottery has been found at Beth Shan from the corresponding stratum that can be so identified.[24]

Since Stratum VIII had been used as the key level and assigned to the era of Thutmose III, Stratum VII must then encompass the intermediate period to the time of Saul. Strata I to III were taken to represent the period of Assyri-

TABLE IV

Current Identifications of Occupation Levels at Megiddo Compared to Identifications by the Chronological Revision*

Level No.	Contemporary Era by Current Views	Contemporary Era by the Revision
I	Babylonian and Persian occupation	Persian occupation
II	Assyrian occupation	Babylonian occupation
III	Assyrian occupation	Assyrian occupation
IV	9th-8th century	Assyrian occupation
IVB-VA	Era of Solomon, later moved to the era of Ahab	Assyrian occupation
V	Israelite occupation under David	Philistines and Assyrians competing for Israelite territory
VI	Philistine phase of Iron I; late judges and era of Saul	Israelite era after fall of northern kingdom
VII-IX	Late Bronze; c. 1580-1100 B.C. Includes era of Dynasties XVIII to XX inclusive	Israelite monarchy
X	Late Middle Bronze; Early D-XVIII	City built by Solomon and conquered by Thutmose III
XI-XII	Middle Bronze IIB	Late judges, David and Saul
XIII-XIV		Early judges
XV	Middle Bronze IIA, Middle Bronze I, hiatus	Late Joshua era; hiatus confined to period between Exodus and Conquest
XVI-XVII	Early Bronze IV (IIIB) c. 2500-1950	Descent to Joshua
XVIII	Early Bronze II; Dynasty If.	Era of Abraham
XIX	Early Bronze I; Predynastic into Dynasty I	Dispersion era
XX	Chalcolithic; Predynastic	Predispersion

*Definitions of these levels are at best only approximate.

an and Persian occupation to the final destruction of the site dated c. 400 B.C.

Several objects datable in terms of Egyptian history were found in Stratum VII.[25] These included an ivory pen-case, carrying the names of Rameses III, and the base of a statue inscribed with the name of Rameses VI. These finds suggested that Stratum VII continued at least to the time of this latter king, who had been given a date c. 1150 B.C. A fragment inscribed with the name of Sheshonk I was found in the dump during the earlier excavations. Since these earlier excavations did not penetrate lower than Stratum IV, it probably belonged to one of these upper strata, and since Sheshonk I was regarded as the same as Shishak of Scripture who sacked Solomon's temple, it would intuitively be assigned to Stratum IV, though this could not be stated as fact.

VII. Too Many City Gates

While the assignment of the identities to the various strata at Megiddo seemed logical in many ways, embarrassing difficulties were nevertheless apparent as the reports of the investigations were critically examined. A principal point of difficulty was related to the observed gate system of Strata V to III. We let Wright present the problem to us as viewed in 1950.[26]

> Above the V gate and the road leading up to it there was discovered the finest fortified gateway yet found in early Palestine. The excavators attribute it to Stratum IV and believe it to be *Solomonic, which it certainly is. . . . It is the gate of the fine Solomonic city-wall previously discovered in the southern and eastern quarters. Yet if it belongs to Stratum IV proper, then we have one gate too many in the strata of Israelite Megiddo.* The reason is as follows: in Stratum III (*ca.* 780-733 B.C.) the gate was composed of two parallel sets of piers, forming a double entry-way. Immediately below it was the foundation of another gate with three pairs of piers, forming a triple entry-way. This is also attributed to Stratum III, but to do so the excavators must assume that it never actually came into use, being replaced by the double gate immediately after it was erected. This now appears as an unnecessarily awkward point of view. It would be much simpler to assume that the triple gate actually belongs to the preceding Stratum IV, now dated from the end of the tenth century to the end of the ninth. This means that the newly discovered gateway with *four* sets of piers and four entry-ways could be placed in Stratum VA-IVB of the tenth century. If so, then the whole fortification system, including the city-wall, previously attributed to Stratum IV, is actulally from Stratum VA-IVB. [Emphasis ours.]

The solution to the problem proposed by Wright, and earlier by Albright, presumes an additional stratum between V and IV which has been designated VA-IVB. This added stratum is thus composed of the upper phase of V and the lower phase of IV. Looking back on this problem a decade later, Yadin commented.[27]

> Another fact connected with the problem of the solid wall at Megiddo created great difficulties for the excavators and for all who studied the Megiddo report. At the southern part of the mound, east of the southern complex of stables, the excavators discovered a huge palatial building constructed of ashlar blocks. This building, which was obviously Israelite, nevertheless lay in part immediately beneath the solid "Solomonic" wall. Furthermore another building . . . of the same level, west of the palatial building, was shown to be covered partly by the stables. The excavators attributed the stables and the solid wall to Stratum IV, while the palace and building 1482 were attributed to a newly-named Stratum IVB — the designation "V" having already been taken up by another stratum.
>
> Since the solid wall and stables had been attributed to Solomon, the lonely palace or fort had to be attributed either to David or to an early Solomonic phase; both alternatives allowed for the belief that Solomon himself tore down this fine building in order to build the city wall, the stables, etc. In spite of the brilliant and ceaseless efforts of Albright and Wright, who have introduced considerable clarity into the complex problems of the Megiddo stratigraphy (particularly by showing that the remains of VA are in fact part of the IVB city), the above difficulty remained. Either the lonely fort was built by David (for which there is no Biblical support) or by Solomon himself, who in either case was "accused" of demolishing one of the finest buildings of Israelite Megiddo for no apparent reason.

VIII. Yadin Reinvestigates the Megiddo Site

It was these difficulties of interpretation that led Yadin to carry out a further brief investigation at the Megiddo site in 1960. In the course of the intervening years, the suspicion had grown that a mistake had been made in attributing the city-wall of Stratum IV to Solomon, and that an as yet, undiscovered wall should exist beneath this solid wall that should properly be attributed to this king. This suspicion was born of discoveries at Hazor which revealed a wall also from this same era. This wall, however, was of casemate construction and thus differed from the solid wall at Megiddo. Reference to the previous reports of Macallister at Gezer revealed a similar casemate wall from this same period. Since Gezer is mentioned along with Hazor and Megiddo as having been rebuilt by Solomon,[28] it seemed strange that the wall at Megiddo, lying geographically between Hazor and Gezer, should be of different construction if all three were of the same Solomonic origin.

It is unnecessary to review the details of the interesting report by Yadin dealing with the further investigations at Megiddo.[29] Suffice it to say that remnants of a casemate type wall *were* found to exist at the expected position, thus tying to a common origin the three walls at Megiddo, Gezer, and Hazor, though this did not prove that any of the walls were of Solomonic origin. Several other conclusions naturally followed from the assumption of a common Solomonic origin of the three walls.

The palace, which had previously seemed to represent an isolated unit in an undefended city, must be considered as part of the city represented by VA-IVB and defended by the same casemate wall. This city must then also be attributed to Solomon, in view of the improbability that such a city was constructed by David and in the light of the similarity of wall structure for the corresponding strata at Hazor and at Gezer. This conclusion in turn necessitated a reversal of the earlier conclusion that the stable complexes and the solid wall were of Solomonic origin, since these structures must belong to a later era. The more recent view is to assign these an origin by Ahab on the basis that the Assyrian inscriptions state that this king had 2000 chariots as part of his defense force, though no mention is made of their location at Megiddo.

The shift in interpretation necessitated by these later discoveries at Megiddo emphasizes the importance of avoiding conclusions that regard current views as infallible pronouncements with which Scripture must be brought into line. These interpretations of archaeology are but tentative theories which are subject to whatever revisions are needed to provide a consistent interpretation for the total archaeology of Palestine. The repeated necessity of reversal of views once regarded as "certain"[30] should provide adequate basis for serious consideration of the thesis of this work, i.e., that the numerous synchronistic failures should rather be recognized as indicating that there is something fundamentally wrong with the premises on which the entire discipline of archaeology is based.

IX. An Alternate Interpretation of the Archaeology of Megiddo

By the proposed chronological revision, it was not Sheshonk I of Dynasty XXII who sacked Solomon's temple in the reign of Rehoboam. It was Thutmose III. Granting this construction, the archaeological evidence for the era of Solomon should be found in strata represented by an era some two and one-half centuries before Sheshonk I. Solomon thus precedes rather than follows this king. By current views, Solomon is assigned to the era of the Iron Age. By the revision, he belongs to the era of early Late Bronze or late Middle Bronze. The strata assigned to this era at Megiddo are those numbered X to VII.

Stratum X provides the proper background for the era of Solomon. Quoting from Wright relative to this and adjacent strata, we read:[31]

> Strata XII-X belong for the most part to Middle Bronze IIB and C [the end of Middle Bronze], dating approximately from the end of the eighteenth to the end of the sixteenth century [*sic*]. Stratum XII presents a new town plan, but reuses and doubles the brick wall of the preceding age. *In Stratum X, it is thought, a new fortification system was erected, of which the gate was found. It was built of hewn stone, carefully fitted together* on the face with the interior filled with rubble and dirt.
>
> *The city gate of Stratum X continued in use through Strata IX-VII,* which cover the Late Bronze Age, beginning about 1300 B.C. [*sic*] or slightly before and ending about 1150 B.C. in the first part of the Iron Age.
>
> The *palace* of the kings of the city was just inside the gate in the northern quarter (area AA). It was built and rebuilt in the successive strata from X through VIIA when it was finally destroyed. *It extended some one hundred eighty feet* along the perimeter of the mound, and *in size must have rivaled that of Solomon later built* [*sic*] *in Jerusalem.* [Emphasis ours.]

With Stratum X identified as that rebuilt or refortified by Solomon, Stratum IX is that occupied by Thutmose III (Shishak). Since the palace and the wall of this city continued in use throughout Late Bronze,[32] the destruction of City VIIA is that by the Assyrians. By this interpretation, Thutmose III did not destroy the city at the time of his conquest,[33] and there is no inference in Scripture or elsewhere that the city was destroyed by Shishak; Josephus states specifically that the cities of Judah surrendered to Shishak without fighting.[33a]

With the era of Solomon correlated with Stratum X, it is possible to correlate the archaeology of earlier Megiddo with the Scriptural accounts with a considerable degree of probability. Since the site of Megiddo is a critical one from the standpoint of defense of the area, it would seem strange if occupation of this site began appreciably later than the point of the Dispersion. It may be reasonably assumed that at that time there was competition among the migrating peoples for the choicest locations. Referring to the diffusion that occurred at the point identified with the Dispersion, Garstang wrote:[34]

> In Palestine many great Canaanite cities have been shown by archaeological discoveries to date their origins from these times such as Hazor, Taanak and Megiddo. . . .

We would thus identify Cities XX and XIX as having their origin at this time. The site was taken by the Israelites, but not occupied at the time of the Conquest. It was occupied at some later time, the definition of which has been a matter of debate, since none of the suggested points meet the specifications of Scripture. By the revised structure, this point should be found shortly after the point marking the Conquest as set at the end of Early Bronze. The proper background for this incident appears in Stratum XV, dated to the end of Middle Bronze I. If Israel conquered the site at the time of the Conquest, but did not completely occupy it till later, it would be expected that there would be a mixture of pottery types at this point. The evidence for such a strange and unexpected situation is brought to our attention in the following statements.[35]

> The situation in Palestine at the end of the third millennium is very curious. Every Early Bronze Age city thus far excavated was evidently destroyed between the twenty-sixth and twenty-third centuries [*sic*], so that we do not have a clear picture of what was going on in the years before 2000 B.C. [*sic*].
>
> A brief revival of Early Bronze Age traditions in pottery occurred in Middle Bronze I, twenty-first and twentieth centuries B.C. [*sic*]. . . . Megiddo was resettled at this time, . . . The excavators include this material in Stratum XV which is dominated by the entirely new ceramic culture of Middle Bronze II, though in none of the find-spots as published were the two types of pottery mixed together.

This shift from a mixed pottery involving a revival of Early Bronze to a stratum completely dominated by the new ceramic is just that to be expected from the details provided in Scripture. The era that follows has been aptly called the Golden Age of Megiddo. This is the era of the newly settled Israelites after this occupation and reaches to the time of Solomon. Here, again, we get a correct picture of the culture and abilites of the Israelites as contrasted to that of their heathen contemporaries. The picture is quite the reverse of that which follows from the placement of Israelite occupation down in the Iron Age.[35a]

Since the palace and city wall of Stratum X reach to the time of the destruction of City VII,[35b] it follows that the city rebuilt by Solomon lasted throughout the era of the northern kingdom of Israel and into the era of the late kingdom of Judah. This follows from the findings of items from as late as the time of Rameses VI in Stratum VII. Rameses VI, by the revision, is given a date early in the seventh century.[36] While Tiglathpileser III of Assyria conquered this site, the city was evidently not destroyed, since it continued to be used as the center of control of this territory by the Assyrians. The destruction of City VII thus belongs to the seventh century. This destruction may well have been by the Assyrians even at this late data, since it appears that Josiah of Judah had regained some sort of control of the site.[37]

The stables first attributed to Solomon and later to Ahab belong to the era of Assyrian control, and the same may be said about the matching gates at Megiddo, Gezer, and Hazor. It is, of course, complimentary to Solomon to give him the credit for these gates, but after all, Solomon was not the author *per se* of every worth-while project in Palestine. Certainly by the time of the Assyrian occupancy, the techniques for producing such structures were known.

A further anomaly is concurrently eliminated by this revised interpretation. By current views, the entire era of Israelite occupation together with all subsequent history at Megiddo must be included in Strata V to I. By the revision, this same period includes Strata XV to I with but five strata attributed to the era of lesser significance in the history of Palestine. This is certainly a more realistic interpretation.

Notes and References

(1) Josh. 17:11-13; see also Jdg. 1:27. The word *tribute* in these verses evidently does not convey the correct meaning; the Canaanites were rather permitted to retain residence at Me-

giddo provided they agreed to a lot as laborers for the Israelites (SDABC on Jdg. 1:28) (2) Jdg. 4:2, 23, 24. (3) Jdg. 5:19. (4) I Kings 9:15. (5) II Kings 9:27; 23:29. (6) Vol. I, Chap. XVI, Sect. VI. (7) K-AHL., p. 219. (8) See quot. of ref. 11. (8a) BA, Vol. IV, p. 12. (9) BASOR, No. 78, p. 5. (10) I Sam. 4:1; 7:14. (11) BASOR, No. 78, p. 6. (12) *Ibid.*, p. 9. (13) *Ibid.*, p. 8. (14) BA, Vol. XIII, p. 38. (15) W-S; see Chap. IX of this volume. (16) Chap. IX, Sect. XII. (17) *Ibid.* (18) See quot. of ref. 13. (18a) See texts of ref. 10. (19) BA, Vol. XIII, No. 2. (19a) BA, Vol. XXIII, No. 2. (20) BA, Vol. XIII, p. 34. (21) *Ibid.*, p. 40; see ref. 4; I Kings 10:26. (22) II Chron. 1:14. (23) I Sam. 31:9, 10. (24) K-AHL., p. 229, 231. (25) BASOR, No. 78, p. 8. (26) BA, Vol. XIII, pp. 42, 43. (27) *Ibid.*, Vol. XXIII, p. 63. (28) See ref. 4. (29) See ref. 19a. (30) See quot. of ref. 26 where the identification of the *solid* wall and associated stable complexes were stated to be certain, yet required abandonment later. Other examples are the abandonment of the massive temple as that of the Abimelech story, the abandonment of the identification of the fallen walls at Jericho as those of the Joshua story. Still others that should be abandoned remain, as yet, unrecognized (See Chap. XII on Samaria). (31) BA, Vol. XIII, p. 34. (32) See 2nd quot. of ref. 31. (33) B-HE, pp. 291, 292. (33a) J-AJ, Bk. VIII, Chap. X, par. 2. (34) G-SJ, p. 76. (35) BA, Vol. XIII, pp. 31, 32. (35a) See Chap. VIII of Vol. I. (35b) See quot of ref. 35. (36) See Vol. I, Fig. 12. (37) II Kings 23:29.

CHAPTER XI

WHO WAS THE PHARAOH WHO GAVE SOLOMON A CITY SITE?

According to Scripture, an unnamed pharaoh liberated the city of Gezer from the Canaanites and gave the city site to Solomon as a present to his recently acquired Egyptian wife.[1] The site was used for the construction of a new city for this wife as a consequence of this act.[2]

> For Pharaoh king of Egypt had gone up, and taken Gezer, and burnt it with fire, and slain the Canaanites that dwelt in the city, and given it for a present unto his daughter, Solomon's wife. And Solomon built Gezer. . . .

Attempts to identify this pharaoah within the framework of current opinion give rise to some serious problems. Since the identity of Sheshonk I with Shishak of Scripture, who sacked Solomon's temple in the 5th year of Rehoboam, is a fixed synchronism in popular thinking, and since the incident in question clearly belongs in the early reign of Solomon, there is little choice but to assume an identity of this king with one of the late rulers of the XXIst Dynasty. The XXIst Dynasty is represented by two lines of kings, one composed of high priests ruling from Thebes, the second ruling from Tanis, in the Delta region.[2a] The former line died out in obscurity prior to any date that can be correlated with the reign of Solomon.[2b] Of the line at Tanis, the last king was Pasebkheno, who reigned 35 years. He was preceded by Psinaches for 9 years and Osochor (Osorkon, Siamen) for six years.[2c] This is as far back into the dynasty as one can logically go and still be within the reign of Solomon based on the presumed identity of Shishak with Sheshonk I. Pasebkheno and Siamen seem to be the most popular nominees for this identity.

If there was any time after the end of Dynasty XVIII when military incursions deep into Palestine by an Egyptian king is incongruous, this was in the era of the XXIst Dynasty.

The kings of the dynasty were for the most part nonentities who left so little by way of accomplishment that it is extremely doubtful if their names would ever have been included among the kings were it not that Manetho included them. Pasebkheno I built an enormous wall, some 80 feet thick, around the temple at Tanis as a defense measure.[2d] While it is not clear who his supposed enemies were, the work indicates clearly that he was on the defensive. Nothing is known of his successor and virtually nothing of the next king. This brings us to the series composed of Siamen, Psinnaches, and Pasebkheno II. Of these, nothing is known of Psinnaches and virtually nothing of Pasebkheno II. Siamen is the best known. He built a temple at Tanis and made a few minor items of repair or addition inscribed with his cartouche. Not one of these kings leaves a scrap of evidence to indicate that he could have undertaken the conquest of a walled city deep in Palestine to provide a site for a new city for a daughter, supposedly Solomon's recently acquired wife.

In this chapter we shall take another look at this problem against the background provided by the proposed chronological revision.

I. Gezer in Scripture

At the time of the taking of Lachish by Joshua, Horam, king of Gezer, came with his army to aid in the defense of Lachish.[3] Evidently Horam recognized that if Lachish fell to the Israelites, it would not be long before he would have to meet the same armies in defense of his own city, a possibility that was notably less desirable as a location for a confrontation. The additional help provided by Horam, however, did not save Lachish; the city was quickly taken and destroyed along with its occupants.[3a] The conquest of Gezer is not mentioned specifically in Scripture. It may be presumed that with the loss of the defending army, the city fell easy prey to the Israelites. Even granting that the city was surrounded by a defense wall, it would only be necessary to surround the city and wait for capitulation, since it had no army of defense. But a different picture is suggested by the Scriptural account which reads:[4]

> However, they did not drive out the Canaanites that dwelt in Gezer: so the Canaanites have dwelt in the midst of Ephraim to this day but have become slaves to do forced labor.

It was not an uncommon practice of invading armies to treat the occupants of cities differently if they capitulated without a battle. It would seem that in this case the choice was to capitulate without a batte and accept the lot of slaves to the Israelites or suffer anihilation if they elected to obstruct the attempt to take the city. It has been inferred that the Israelites were unable to take the city or that they did not have free access to the city when occupied by the Canaanites as slaves. It is difficult to see how the Israelites could exact forced labor from the Canaanites except as they had access at will to the city.

It is quite possible that at subsequent times the Canaanites were able to attain some degree of independence, just as Edom and Moab were eventually able to revolt from Israelite control.[5] This would seem to have been the situation when the ruling Egyptian pharaoh at the time of Solomon drove out the Canaanites from the city, burned it, and gave the liberated site to Solomon as a present to his recently acquired Egyptian wife. On the other hand, it would appear the the Israelites occupied Gezer at the time of the war of David with the Philistines at Gezer,[6] since the reference is a running account of the wars of David with his enemies. It could be hoped that archaeology of the site might provide information to clarify some of these obscure points.

II. Extra-Biblical References to Gezer

Most of the extra-Biblical references purported to refer to Gezer may be logically queried. In some cases the identity of the site referred to cannot be unequivocally established as applying to Gezer in southern Ephraim. An example is the inscription of Tiglathpileser III showing a siege of a walled city, the name of which has been transliterated as Gazru.[7]

> . . . So some city of *Gazru* is the subject of the relief; the problem knowing if our Gezer is the one. Just as there were several "Gaths" and "Socohs" there may have been more than one Gezer.

In other cases, it is the interpretation of the intended meaning that remains open to question; in still others no information is provided which allows correlation with archaeological observations.

Merneptah's inscription[8] contains the expression "seized upon is Gezer." This inscription has been taken as providing proof that Merneptah invaded Palestine and conquered

Gezer. Such a deduction is taking very much for granted since he left no inscription to substantiate any such military invasion of Asia. By the revised structure, his inscription is but a reflection of the disaster to Israel when the Assyrians invaded this territory, resulting in the eventual fall of Samaria and the northern monarchy of Israel.[9]

Thutmose III left an inscribed relief on the wall of the Karnak temple showing stylized prisoners identified by the name of the town of their origin.[10] One of the names could refer to Gezer. At least there is nothing anomalous in recognizing that Thutmose III may have taken this city, since he is the one king who can be unequivocally recognized as having marched his armies through central Palestine. By the revision, this was at the time of the sacking of the temple of Solomon. Granting the identification of Shishak of Scripture with Thutmose III, as defended in this work, the evidence is against the view that his invasion resulted in the destruction of cities. However, the incident of the conquest and destruction of this city by the pharaoh who gave a daughter to Solomon as a wife, precedes the invasion by Thutmose III, and the site may well have been among the cities surrendering to him.[11]

The name of the site claimed to have been conquered by Thutmose IV has far less support for identification with Gezer. The Gezer calendar inscription has a degree of interest, but has no bearing on chronological problems. The interpretations of the references to the site in the Amarna Letters[12] are conjectural, and even if the conjectures were correct, the assigned background depends on the validity of the dating of these letters, a matter that is challenged in this work.[13]

III. Archaeological Investigations at Gezer

The early investigations at the site of Gezer were by Macalister at the opening of the century (1902-1909). The site is one of the largest thus far excavated in Palestine. In spite of the small crew used in the excavations, some 18 of the 27 acres of the site were examined, revealing a number of important finds. In the very nature of the case, his methods did not measure up to those developed from experience over the subsequent decades. It is thus difficult or impossible to assign his finds to any specific archaeological level.

Thus much of the potential value of his work has been lost.[14]

> . . . In Palestine the greater part of the major excavations before the First World War on the sites such as Gezer, Samaria and Jericho cannot be relied upon, and much revision is required of the results of the excavations between the two wars. . . .
>
> . . . Gezer was also excavated many years ago, and the finds cannot be satisfactorily interpreted.
>
> The tragedy of the Gezer excavations is simply that a mass of rich material was unwittingly torn out of historical context and published in such a way as to make it largely useless for historical reconstruction.

The brief excavations by Rowe in 1934 yielded nothing of further significance. Excavations on a more rigorous scale were conducted during the years 1964-1966 by a Drew-McCormick-ASOR group.[15] In a limited area (Field I), the excavations were conducted down to the remains of Middle Bronze IIA. From this early era was discovered a massive wall some 50 feet in thickness, this being the largest stone structure ever found in Palestine. The wall was examined to a height of 13 feet without reaching its foundations. The unexplained "puzzle" was why this wall should have been abandoned so soon after its construction. It was perfectly clear, however, that the site was one of the most strongly fortified in all of Palestine at this time.

Stratum 7 in Field I was assigned to the 15th century and revealed evidences of massive destruction.[16]

> In Field I, Stratum 7, belonging to the 15th century B.C. [*sic*], is of interest chiefly for its evidence of a massive destruction. In Area 3 [of Field I] more than three feet of destruction debris — a jumble of fallen stones, burned mudbrick, and ashes — overlay the smashed pottery on the floors.
>
> To whom is the violent destruction of Stratum 7 to be attributed? Egyptian records indicate that either Thutmosis III in 1468 B.C. or Thutmosis IV at the end of that century may be the culprit. A final determination will probably have to await the recovery of more material from this level elsewhere on the mound.

The rebuilt city of Stratum 6 and 5 provided a "fine terra cotta Astarte Plaque," in the familiar Egyptianizing style.[17] Strata 4 and 3 were assigned to the 12th and 11th centuries on the basis of the presence of Philistine pottery, thus associating these levels with the Philistine occupation of this territory at the time of the late judges and in the reign of Saul. While a gap in the occupation between the 11th and

2nd centuries was indicated at Field I, this gap was narrowed in Field II by observations of meager evidences attributed to the 7/6th centuries. Thus by the traditional chronology, the area of Field I was not occupied during the period of Solomon's rebuilt city. The destruction by the unnamed Egyptian pharaoah was identified with Stratum 6 of Field II (not to be correlated with Stratum 7 in Field I, belonging to a distinctly later date).[18]

> Overlying the scorched earthen floors of Stratum 7 was a dramatic destruction level — black ash, chunks of charred timbers, calcined plaster, tumbled stones and mudbrick debris — reaching a depth of twenty inches. Since the pottery from these levels is mid-10th century B.C.[*sic*] in date, it is highly likely that in this debris we have vivid evidence of the destruction of the Egyptian Pharaoh, probably Siamun (ca. 960-930) who according to I Kings 9:15, 16 "went up and captured Gezer and burnt it with fire" before presenting the city to Solomon as his daughter's dowry when he gave her in marriage to the Israelite king.

The assignment of the rebuilt city above this as that rebuilt by Solomon was a matter of course.

IV. An Altered Interpretation of the Archaeology of Gezer

On first reading, it might appear that the case has been completely closed in favor of identifying the evidence of Stratum 6 in Field II as that destroyed by the Egyptian king who presented the site to Solomon free of encumbrance by the Canaanites. However, before closing the book on the problem, the archaeology of the site for the period assigned to the era of Solomon by the altered chronology should be noted. Since, by the revision, the chronological error by current views is about one-half millennium, and since Solomon belongs to the mid 10th century, the archaeological stratum we seek would now be assigned to the 15th century. This is the date attributed to Stratum 7 of Field I, excavation in Field II not having reached to this point. The report of the finds in Stratum 7 of Field I are provided in the quotation of reference 16.

The archaeology of Gezer thus reveals two different strata, several centuries apart, both of which reveal evidences of massive destruction by fire and both of which were followed by a reconstruction of the city. If a correct decision is to be made as to which of these two represents the era of Solomon and the destruction by the Egyptian pharaoh, it must be made in terms of evidence other than the evidences of massive destruction by burning and the subsequent reconstruction. It is thus imperative that we look carefully at the additional evidence before arriving at a final conclusion.

We look first at the additional evidence purported to substantiate the identification of the destruction of Stratum 6 in Field II as that by the Egyptian pharaoh.[18a] Certainly the appearance of Philistine pottery in the strata above 6 and its absence in strata below 6 does not constitute any such confirmation of this identification, since the Philistines again come into prominence in this territory during and after the reign of Tiglathpileser III.[18b]

When the evidence is reduced to its simplest terms, it is apparent that the identification rests virtually its entire weight on the correlation of the pottery and wall construction with that *assumed* to be from the Solomonic era at other sites. For example, Scripture indicates that Solomon rebuilt or refortified Megiddo, Hazor, and Gezer. At the first two sites named, city walls have been found of casemate construction apparently by the same author. Since by current opinion, the strata belong to the general era of Solomon, this pottery and this type wall construction are taken as index items to locate the era of Solomon wherever they are found. But this type wall construction and associated pottery was never *proved* to have been of Solomonic origin. This is an assumption based on still other unproved assumptions. Other finds at Shechem regarded as *certainly* of Solomonic origin, on further investigation required redating at a later period.[19] How can we be certain that further investigations at Gezer and at these other sites may not also reveal a requirement of similar movement to a later date, particularly when the proper backgrounds to the Exodus, the Conquest, the Dispersion, the Famine of Joseph, the Descent, etc. all require a similar later dating in terms of Egyptian history?

While it is complimentary to Solomon to attribute to him everything of significance from this general era, it is a somewhat broad view to assume that Solomon was the only person in this entire era that was capable of such productions. In any case, are we not also asked to believe that these productions were not the result of any wisdom on Solomon's part and that he merely copied from his "culturally superior neighbors"[20] the Phoenicians? If the Phoenicians also had some very competent designers and construction workers among them, then why not the Assyrians also, to whom we would attribute these casemate walls on the basis of a movement forward on the time scale by a plurality of centuries?

Up to a point, the investigations at Gezer had not revealed the expected casemate walls to correlate with those at Megiddo and Hazor. Then the confused reports of Macalister were re-examined, and, with "brilliant intuition," it was noted that elements in the plans drawn by Macalister for a structure identified by him as a Maccabean Castle of the 2nd century were in reality parts of the Solomonic gate and casemate wall to be expected of the Solomonic era at Gezer,[21] and were therefore to be dated seven centuries earlier. Further excavation in Area I of Field II revealed the remains of a wall of casemate construction, associated with pottery characteristic elsewhere of strata assigned to the era of Solomon, though the excavations were not carried out which would demonstrate any connection with the wall of Macalister, yet one *seemed to be* a continuation of the other. Even if it is eventually proved to be the case, does this prove that the destruction of Stratum 6 in Field II was that by the Egyptian pharaoh? Or does it suggest that the date for these other casemate walls should also be moved forward on the time scale?

Field I was hardly in excess of a hundred feet from Field II, where this wall was discovered, and is directly adjacent to the gate system.[22] Yet strangely, in Field I, there was found no evidence of occupation of the site between the 10th and 5th centuries, which era would include that of Solomon.

On the other side of the question is the report of the finding, in the rebuilt city after the destruction of the city of Stratum 7 in Field II, of a terra cotta plaque showing a nude goddess with ringlets of hair, like the familiar Egyptianizing style worn by the Egyptian goddess Hathor. For a city built by Solomon for an Egyptian wife, this is the expected type of item to be found. To this evidence must be added the entire weight of the numerous problems that are provided solutions in terms of the proposed revision. The presumed gap in the occupation of the site is thus largely closed, just as it is in the case of the inexplainable gaps in the chronologies of Greece, the Hittites, and at numerous other sites and areas.[22a]

Reference to the chronological chart of Figure 10, Volume I, shows that the ruling king at this time was Thutmose I. While there is no extant inscription stating that Thutmose I gave a daughter to Solomon as a wife, the evidence does show that he was able to muster an army that reached the Euphrates River and was a king who, without question, had the ability to make the conquest of Gezer, evidently with the permission of Solomon to move his armies through the territory of Judah to accomplish this purpose. This background is in direct contrast to that of the impotent kings of Dynasty XXI.

The massive wall, 50 feet thick, was then that which fortified the city at the time of the Conquest. This explains the absence of any reference in Scripture to the conquest of this particular site. It was probably not necessary to conquer it; the population evidently capitulated without a conquest after the destruction of the army at Lachish. The puzzle of why such a fortified site should be abandoned may then be explained on the basis that the occupants were moved elsewhere, perhaps as small labor groups, as a means of preventing any attempt at revolt.

Notes and References

(1) I Kings 9:16. (2) V. 17. (2a) P-HE, Vol. III, p. 186. (2b) *Ibid.*, p. 219. (2c) *Ibid.*, p. 192. (2d) *Ibid.*, p. 221. (3) Josh. 10:33. (3a) *Ibid.*, v. 32. (4) Josh. 16:10 (RSV). (5) II Kings 1:1. (6) I Chron. 20:4. (7) BA, Vol. XXX, p. 43. (8) The pertinent part of this inscription is quoted as ref. 12 in Chap. IV, Vol. I. (9) Vol. I, Chap. XVII, Sect. X. (10) See pictures in P-ANEP, Nos. 312, 313. (11) Vol. I, Chap. XVI, Sect. VIII. (12) BA, Vol. XXX, pp. 62ff. (13) Chap. XVII, Sects. XIV, XV. (14) K-AHL, pp. 31, 117; BA, Vol. XXX, p. 51. (15) Reported in BA, Vol. XXX, No. 2. (16) *Ibid.*, p. 58. (17) *Ibid.* (18) *Ibid.*, p. 60. (18a) *Ibid.*, Table, p. 60 gives the dating of this level. (18b) II Chron. 28:18; L-ARAB, Vol. I, pars. 779, 801, 815. (19) Chap. X, quot. of ref. 26. (20) W-BA, p. 140; quot. of ref. 22, Vol. I, Chap. VII. (21) BA, Vol. XXX, p. 60. (22) Based on map scale, *Ibid.*, p. 50. (22a) A list of these with references is given as ref. 87 of Chap. V.

CHAPTER XII

SYNCHRONIZING THE ARCHAEOLOGY OF SAMARIA WITH SCRIPTURE

There is probably no incident in all Bible history that is regarded as more solidly synchronized with archaeological evidences than is the case of the building of the city of Samaria by Omri, king of Israel (dated by Thiele 885-876 B.C.).

I. Samaria in Scripture

The name Samaria is used in Scripture to refer to the city both from the time it was built by Omri and to its subsequent history. The term is also used to refer to the territory containing this city. Often reference is to the entire territory of the northern monarchy of Israel as distinguished from the southern monarchy of Judah. The meaning of the term in each Scriptural usage is apparent from the context. Hence we may neglect this larger group of references and confine our attention to the few references to the *city* of Samaria. These can be further reduced by neglecting those that contain no information pertinent to the problems here under consideration.

The city known by the name Samaria has its origin, according to Scripture, in the building of the city by Omri. This building began in the 6th year of his 12-year reign. The Scriptural reference reads:[1]

> In the thirty and first year of Asa king of Judah began Omri to reign over Israel, twelve years: six years reigned he in Tirzah. And he bought the hill Samaria of Shemer for two talents of silver, and built on the hill, and called the name of the city which he built, after the name Shemer, owner of the hill, Samaria.

Ahab, successor to Omri, used the city as his capital and built there his palace, which is designated in Scripture as an "ivory house."[2] The problem of the meaning of this designation has been duly considered by others. While the use of ivory in the decoration of the contained furniture is altogether probable,[3] the alternate assumption that the carved ivory was used in the decoration of the wall panels appears to be more probable,[4] this deduction being based on the abundance of the remnants of these ivories found on the site.[5]

The city of Samaria was taken by the Assyrians under Shalmaneser V (727-722) or by Sargon II (722-705), after a siege of three years.[6] At that time, 27,290 of the population, probably representing the more well-to-do, the more skilled and the more influential, were removed from the area.[7] The city was rebuilt by Sargon and repopulated with foreigners imported from Babylon and Persia.[8] It is stated further that at this time the ruling king of Egypt was known to the Biblical writer as King So,[9] a name whose identiy has long been a matter of debate and speculation, since no king of Egypt is known by this name otherwise. In another connection, we have identified King So as Rameses II.[10] In any case, the statement indicates that Egypt was exceedingly weak at this time and that Assyria held some degree of control over this territory, since it is also stated that So was imprisoned by the Assyrians.[11] That Egypt was being harassed by the armies of Sargon is confirmed from his inscriptions.[12]

The territory of Samaria (though the city is not specifically mentioned), was reoccupied by the Israelites at some point during the next century, since King Josaih of Judah (639-608 B.C.) extended a marked influence into this territory.[13] It follows that the Assyrian hold on the territory, after the fall of Samaria, was not permanently solid, a situation that apparently held for the territory to the north, which was also formerly under Assyrian control.[14]

The many references to the pagan worship in this era under the influence of Ahab are of doubtful significance from a chronological standpoint, since this situation continued over a long period of time and over a wide area.

II. Samaria in the Extra-Biblical Sources

Josephus rehearses the story of the building and fall of Samaria and provides a few details not noted in Scripture.[15] Samaria is mentioned in several inscriptions of Sargon,[16] some of which suggest attempts at revolt on the part of the Israelites. Later references are extant from as late as the time of Alexander the Great, but these are not pertinent to the problems here under consideration. The site mentioned in the Amarna Letters as Tsumura and which has been identified with Samaria[17] more probably refers to the site of Simyra in Phoenicia, such a city also being mentioned in the Assyrian inscriptions, and both sources indicate a location on the sea coast,[18] which detail is not true of Samaria. The finds in the palace of Sargon of ivories, matching those from the ruins at the Samaria site,[19] indicate clearly that the palace of Ahab was stripped of most of these ivory decorations and carried to Assyria. The finds of similar pieces of carved ivory at Arstan Tash in Syria indicates at least an origin in the same workshop, though the examples found there probably did not constitute any part of the decoration of Ahab's palace.

III. Expectations for Synchronism from the Archaeology of Samaria

It has been inferred from the Scriptural account that the city built by Omri was on a site not previously occupied, though admittedly the account does not say so. If this assumption is correct, then the lowest city to be observed from an archaeological examination of the site should be readily identifiable as that built by Omri. The pottery in association with that city could then be dated to the era of Omri's reign, and this pottery could then be used as an index type for dating levels in other mounds of Palestine containing similar pottery.[20] With levels in a number of sites thus fixed, it should be possible to more convincingly assign dates to the levels above and below this index level. With such a solid synchronism between Scripture and archaeology, it would seem that the proof of the general correctness of the currently accepted chronological structure of the ancient world could be considered as virtually settled, at least back to the incident of the Exodus. If it is conceded that these correlations have been made in an unequivocal manner, the problem might then be considered as closed in favor of the current views and against any and all proposals which call for severe alteration of this structure. But the writer does not concede this premise. With the numerous anachronims and anomalies to which attention has been called in this work, the question must logically be regarded as still open to debate as to whether or not the era of the origin of Samaria has been properly correlated with the corresponding era of other Palestinian sites.

IV. Difficulties in the Archaeology of Samaria

The site of Samaria has been an exceedingly difficult one to investigate archaeologically and even more difficult to interpret. A number of factors have contributed to this situation. One large difficulty was reported by the investigators.[21] The site is still occupied and used for agricultural purposes. Permission to do any digging at all was on the basis of outright purchase of the land or conditional on leaving the area investigated in its original condition at the conclusion of the dig. Since the former choice was not feasible, the method was employed of digging and initial cut, then transferring the soil of an adjacent cut back into the trench made for the first, etc., finally filling the last cut with the soil removed from the first one. This procedure left no possibility of re-examination of the previous cuts, as might be desirable, for comparison with the observations from the subsequent cuts. However, the extreme care used in recording observations may well have been adequate to offset this disadvantage.

A further difficulty has resulted from the repeated building and rebuilding on the site for many centuries, and from the sinking of building foundations deep into the earlier strata. In still later times, the area has been used for agricultural purposes with the soil having been plowed and replowed many times until the items have been so thoroughly mixed that it is impossible to assign the finds to any particular stratum.[22]

> It must be recalled that Samaria was a major city of Palestine during the late Hellenistic, Roman and even Byzantine periods. Architects of those ages built so well that the stratification below their structures was generally destroyed. The partial remains of the Israelite palace were discovered in the "basement" or rather within the foundations of the Temple of Augustus on the western summit. Consequently, the disentagling of the stratigraphy of the site has been a most difficult task.
>
> We have not succeeded in identifying even the foundations of the house (palace of Ahab) itself. For more than 1200 years after the reign of Ahab, the summit of the hill where the ivories were found, was the center of one of the greatest cities in Palestine. It is now given over to agriculture but for many centuries it was a busy residential quarter in which houses were built and destroyed and rebuilt again. A little of the great enclosure walls has survived, but in the wide area which has been examined between those walls, we have not recovered the plan of a single house belonging to the Israelite or Hellenistic period. We have found a number of foundations and even a few walls which can be assigned to early period or sub-periods, but the first plans sufficiently coherent to make any sense date from the Roman period.

In the same context (as for some of the ivory pieces) there were remains of charred wood, part of an unworked tusk or tusks, some midden rubbish, such as animal bones, burnt olive stones and a pomegranate husk which came presumably from a broken refuse pit. The artefacts included many Israelite potsherds, some glass and paste insets, like those still in position on some of the ivories, a neo-Babylonian seal and a Philisto-Arabian coin. The position of any single fragment in debris of this mixed description is not of much significance; the soil has been turned over too often.

V. *Archaeological Investigations at Samaria*

Investigations of the Samaria site were begun in 1908 by a Harvard University group, then expanded shortly to include support from the Hebrew University at Jerusalem, the Palestine Exploration Fund, the British Academy, and the British School of Archaeology in Jerusalem. The work, under the direction of J. W. Crowfoot, continued at intervals to the year 1935. The reports of the excavations by Crowfoot, Kenyon, and Sukenik were published in three volumes dealing with buildings, ivories, and objects respectively.

The excavations included an extensive examination of much of the area on the summit of the mound which had been the site of the "ivory house" of Ahab and evidently the site of the palace of Omri before him. A "cut" was made across the summit of the mound, interrupted at points to avoid movement of trees or other objects. This cut, at specified points, extended to the lowest evidences of traces of occupation.

In the area of the palace were found numerous remnants of ivory pieces, defining unequivocally the area as that of Ahab's palace. The palace area had been enclosed by a casemated wall for defense and by a second outer wall, the superstructures having been completely removed. The foundations of the walls had been laid in trenches cut into the rock, every stone having been subsequently removed for use in later building operations. These trenches permitted following the plan of the wall structures.

The evidence for the stratigraphical data was obtained from three limited areas, none of which appear to have represented an area of dwellings.[23] Evidence of a much earlier occupation, in Early Bronze I, was observed in certain pockets in the rock surface. Above this, but below the floor which represented the first coherent plan of building, were found pottery sherds, "believed to be of Iron I,"[24] and what appeared to be remnants of two walls. A sequence of six building periods were observed, of which the upper two may have represented a single stratum. The lower two periods (I and II) were attributed to the era of Omri and Ahab, the second having ended in violence, either by earthquake or conquest.

VI. Interpretations of the Archaeological Evidence

The observations from the excavations were interpreted in the reports as recognizing *no* occupation of the site prior to the construction by Omri, except for the minor evidence of occupation many centuries earlier in Early Bronze. The pottery sherds found beneath the floor of the first coherent building plan, and regarded as of Iron I, were considered as part of the fill, brought there from elsewhere on the mound prior to construction on this particular area. By this interpretation, these sherds belonged to the era of the earliest construction. Building Period I was thus assigned to Omri and Building Period II to Ahab.

Since it was not feasible to consider builders tearing down a wall in order to replace it with a more poorly constructed wall, the destruction at the end of Period II was interpreted as resulting from either an earthquake or a conquest. No specific date or cause was otherwise suggested. The same basis for interpretation used for the sherds below Building Period I was used to associate sherds below successive floors marking building periods, *i.e., that the pottery of each period was that of the building period above it.* This plan was defended by Miss Kenyon thus:[25]

> At Samaria, the filling overlying any one floor is almost invariably the make-up imported for the floor above. The succession common in a brick-built town, of an occupation layer overlying the floors, succeeded by a destruction level above which the new floors are laid, is not found, since stone walls do not produce continual deposits in the way that mud brick ones do. It is therefore only the pottery of the period of construction that can safely be associated with a building, and not that of the succeeding period of occupation. All the stratified pottery comes from beneath the floors associated with the various walls.

VII. The Interpretations Queried

Following a scrutiny of the reports of the investigations at Samaria, several scholars concurred in the opinion that the suggested interpretations of the archaeology of the Samaria site should be reconsidered. The principle point of question was the validity of the premise used in associating the sherds with the building periods. The alternate interpretation by Wright, Albright, and others would associate the various building walls with the sherds found *above* the floor which defined the construction of that period. By this interpretation, the sherds found below the floor of the lowest coherent building plan belongs *prior* to the reign of Omri: it would follow that Omri did not build his city on virgin soil not previously occupied. Wright commented on this point with emphasis:[26]

> When Omri purchased Samaria, he was not buying an empty hill, but a hill with a small village on it.

Admittedly, Scripture does not state that he bought an empty hill, and there is nothing more than a mere suggestion that this was the case. This question must find its answer in a correct interpretation of the archaeological evidence. Of far greater importance, however, is the effect that this altered view has on the proposed synchronizing of the earliest evidence of occupation on the site with the era of Omri and the effect that it may or may not have on the interpretation of the subsequent building periods.

Wright admitted that this deduction was not based on any observations of *structure* that could be dated earlier than those attributed to Omri, but rather on the necessary earlier dating of the sherds found below the floor of the lowest coherent building level, and the greater abundance of the pottery remnants above this floor than below it.[27]

> The dating of these building phases is derived from an analysis of the pottery on the understandable assumption that the earliest extensive deposit would belong with Period I from the time of Omri.

Objection was also raised to the inclusion of Building Periods I, II, and III in such a brief period of time as 35 years. However, *the major argument against the intepretation* in the reports was the observation by several scholars, who examined the reports, that the *sherds found beneath* *this lowest floor were like those which had been previously dated significantly earlier* than the time of Omri.[28] While Wright suggested dates in the tenth century, Albright contended that some of these pottery remnants reached back into the thirteenth century.[29]

> Here and there one may make a few observations. The collared rim of a stone-jar shown in Fig. 1:16 (p. 100) was carefully examined by the writer at the time of its discovery; it was well worn along the edges, showing that it had been knocking about on the surface for some time. At all events, it must date from not later than the eleventh century. A few similar bits, as well as some cooking pot rims, may easily go back to the period of the Judges, when a small village may have stood somewhere on the site.

Albright also voiced the view that:[30]

> . . . another campaign at Samaria, digging with the Wheeler-Kenyon method in the residential area, is imperatively needed in order to clear up minor subsisting differences of opinion. Archaeology can advance only by putting tentative stratigraphic results to experimental test, not once but repeatedly.

It is thus apparent that certain critical data needed to provide clear answers to problems in the archaeology of Samaria are not yet available. An examination of the residential area may well indicate that the prevalence of this pottery type reaching back into the thirteenth century is considerably greater than suggested by the meager evidence from the court area. Since this is the case, the writer would suggest a third interpretation which he believes has greater support from the available data than either the interpretation of the investigators or of those who have later examined the reports.

VIII. An Alternate Interpretation of the Archaeology of Samaria

There is another line of evidence in the reports which seems not to have been taken into consideration. Reference is to the type of masonry observed in the stones that must have comprised part of the foundations of the walls which surrounded the palace area. This masonry is stated to have been "distinctive and rare."[31] Hence this distinctive type of masonry should also be correlated with its datable use elsewhere. The characteristics which make the masonry distinctive are described in the reports of the investigators. Of the other known examples of this masonry type, that at Tyre and at Beth Shan are stated to be undatable, but that at Ugarit (Ras Shamra) is dated to the thirteenth century.[32]

> The earliest example [of this type masonry] occurs in some walls in the top stratum of Ugarit (Ras Shmra) in the far north of Syria. The stratum is called Proto-Phoenician by Dr. Schaeffer *and it is assigned to the thirteenth century*. . . . these buildings were constructed mainly of rubble but the rubble rested on a footing or socle of squared stones *exactly* like those at Samaria or Megiddo. . . . [Emphasis ours.]

Except for the pressure of certain concepts regarded as unalterably settled, but for which actual proof to this end has never been presented, the logical deduction here is that both this lowest pottery type and the walls of the structures of Building Period I belong to what is defined by the currently accepted chronological views as the era of the thirteenth-twelfth centuries. A mass of evidence has been produced in this work to indicate that this chronology is in gross error, the magnitude of the error at the time of the Exodus amounting to somewhat more than six centuries. This has been reduced to somewhat over four centuries by a further error which allows but two centuries between Dynasties XII and XVIII, when the period is actually more than four centuries in duration. The era of the thirteenth century, by popular views, is then actually the ninth, having been miscorrelated with the corresponding levels in other mounds as indicated above. Hence the identity of the lowest building period *is* that of the time of Omri. Building Period II is then that of Ahab. Since the siege of Samaria by Benhadad of Syria was a failure,[33] there is no ultimate reason for not allowing that the palace of Ahab survived to the fall of the city to the Assyrians. Subsequent periods then belong to the period after the fall of Samaria to the Assyrians, thus explaining the more extensive changes in pottery styles[34] without limiting Periods I, II, and III to the brief period suggested in the reports of the investigators. Miss Kenyon was then correct in assigning the pottery below the floor of the Omri building phase to the same era as that of the structures of Period I. There is thus no need to assume that Omri built on an occupied hill, the evidences for occupation in Early Bronze having ended centuries before this.

This interpretation recognizes the same alteration in the traditional chronology of Egypt that also permits the retention of the fallen walls at Jericho as those of the Joshua account, the same that places the final end of Ai in the era of the Conquest as indicated in Scripture, the same that permits the retention of the identification of the massive temple at Shechem as that of the Abimelech story, the same that provides the proper backgrounds to the incidents of the Exodus, the Oppression, the Conquest, the Descent, and the Famine of Joseph, and the same that has provided solutions to numerous other problems, many of which are not related to Scripture.

Notes and References

(1) I Kings 16:23, 24. (2) II Kings 17:5-7. (3) K-AHL, p. 206. (4) C-SEI, p. 1. (5) *Ibid.*, p. 2. (6) See ref. 2. (7) L-ARAB, Vol. II, par. 4. Evidently the last year of Shalmaneser V was the first year of Sargon. Sargon claims the credit for this conquest, though most of the siege was in the reign of Shalmaneser. (8) Josephus locates the Cutha of II Kings 17:24 in Persia (J-AJ, Bk. IX, Chap. XIV, par. 1). (9) See ref. 2. (10) See Vol. I, Chap. XVII, Sect. XII for a proposed identification of So. (11) See ref. 2. (12) L-ARAB, Vol. II, pars. 55, 80, 92, etc. (13) II Chron. 34:1-6. (14) See L-ARAB, Vol. II, pars. 4ff. for claims of Sargon relative to his conquests. (15) See ref. 8. (16) See ref. 14. (17) V-AC, Chap. VI. (18) L-ARAB, Vol. I, par. 770; Letter CLXI given in P-HE, Vol. II, p. 290; see *Ibid.*, p. 320 for identification of Tsumura with Simyra. (19) CKS-SB, p. 3. (20) K-AHL, p. 262. (21) See ref. 19. (22) BASOR, No. 155, *Ibid.* p. 17; C-SI, p. 2; *Ibid.* (23) BASOR, No. 155. p. 18; see 2nd quot. of ref. 22. (24) BASOR, No. 155, p. 18 (citing Kenyon). (25) Kenyon, cited by Wright, BASOR, No. 155, p. 21. (26) BA, Vol. XXII, p. 77. (27) BASOR, No. 155, p. 19. (28) *Ibid.*, p. 20. (29) *Ibid.*, No. 150, p. 22. (30) *Ibid.*, p. 23. (31) CKS-SB, p. 6. (32) *Ibid.* (33) I Kings, 20:1ff. (34) BASOR, No. 155, p. 20.

CHAPTER XIII

SCRIPTURE, ARCHAEOLOGY, AND THE PHILISTINES

The Philistines represent a further gross engima in the problem of correlating the archaeology of Palestine with the histories of the occupants of this territory. The problem is complicated by the existence of a number of peoples who were culturally related to the Philistines, but who were nevertheless sufficiently distinct from them to have been recognized as separate peoples by the ancients, though such distinction does not seem to have been made by the Bible writers.

I. The Philistines in Early Scripture

According to the table of the nations as given in Genesis 10, the Philistines are the descendants of Philistim in the line of Casluhim, son of Mizraim, ancestor of the Egyptians. Since the Philistines are stated to have come from Caphtor,[1] which is undoubtedly correctly identified as Crete,[2] they would certainly be closely related to the Caphtorims, who are also of the line of Mizraim[3] and who, from their name, also must have settled in Crete (Caphtor) and have given the island its ancient name.

Scripture records the presence of the Philistines in the territory just to the south of Palestine from the time of Abraham. At this time, they may not have comprised a vast population, but neither were they an insignificant people, since they had a king over them (Abimelech) and his people (armies) are referred to as a host. At the time of the Exodus, the Philistines continued to occupy this same territory, as evidenced by the routing of the escaping Israelites to avoid passing through Philistine territory, though this was the more direct route.[5]

II. The Philistines in Scripture for the Post-Exodus Period

The Philistines appear as a fully settled and organized people in the area south of Palestine at the time of the conquest under Joshua.[6] At that time, the people were ruled by five lords or kings, each ruling over a city state. They also appear among the oppressors of Israel during the period of the Judges; the earliest mention is at the time of Shamgar.[7]

Even at this time, the Philistines were evidently not a vast population, since the slaughter of 600 of them is represented as a significant victory.

After an interval of somewhat less than 300 years, the Philistines had become sufficiently powerful to dominate the Israelites[8], at least locally. From this time on through the era of the monarchy, we find periodic mention of the Philistines, who continue to occupy territory on the southern border of Israel; at times they are even within Israelite territory. That their power was intermittantly broken is indicated by the stated results of the wars with the Israelites at the time of Samuel,[10] at the time of David,[11] in the reign of Uzziah,[12] and in the reign of Hezekiah.[13]

Pertinent to the problems to be dealt with is the appearance of the Philistines along the *northern* coastal region of Israel in the area of Megiddo and Beth Shan at the time of Saul,[14] as well as in their more commonly recognized home in the south. To have maintained their presence in territories thus far separated suggests that they controlled the coast between these territories, either by land or by sea or both.

The Philistines continued to occupy the territory in the south into the reign of Ahaz (735-715 B.C.).[15] Ahaz was king of Judah at the time of the fall of the northern kingdom of Israel to the Assyrians (721 B.C.). Since the Assyrians already were harassing the southern kingdom of Judah also, the Philistines would appear to have been competing with the Assyrians for the diminishing Israelite territory. Such a situation could be expected to be a source of difficulty between the Assyrians and the Philistines. It is apparent from the inscriptions of Tiglathpileser of Assyria and of his successor, Sargon,[16] that untoward relations *did* exist at this time between these two peoples.

The Philistines continued to be the object of prophetic denunciation by the prophets after the fall of Judah,[17] indicating that they continued to have at least a nuisance capacity long after the fall of the southern kingdom. The Philistines came to their final end under the reign of one of the kings of the XXVIth Egyptian Dynasty.[18] However, the Assyrians, or possibly the Babylonians, cannot be denied a possible part in their demise.

III. Current Views on the Origin of the Philistines in Palestine

While Scripture indicates the presence of the Philistines in Palestine from the time of Abraham, this concept is generally rejected by archaeologists. This latter view is based on the absence of *recognized* archaeological evidence for such occupation prior to the incident of the invasion of Egypt by the Sea Peoples in the reign of Rameses III (c. 1200 B.C. by current views), or possibly a few years earlier in the reign of Merneptah. This invasion was a failure and the remnants of the abortive attempt were thrown back on Palestine and Syria.

These invaders, known as the Sea Peoples, represented a mixture of races who had origins in the islands of the Mediterranean, including Cyprus, Crete, and the islands of the Aegean Sea near Greece. However, some of the names indicate a possible origin in Greece or in southwest Asia Minor. The inscription of Rameses III[19] mentions peoples by the names Palusathu (generally identified with the Philistines), the Shakalaha, the Sherdanu, the Zakkaru, the Ashwaka (thought by some to refer to the Achaeans of Greece), and the Danaus (whom Gordon would identify with the Danites of the tribe of Dan on the basis of Judges 5:17, but whom most scholars take to be one of the several peoples related culturally to the Philistines). The Egyptian list provides the names of ten different peoples who comprised the invaders.

On the basis of the appearance of a new type of pottery in the area occupied by the Philistines following the attempted invasion, and in the absence of any earlier *recognized* evidence of the Philistines in Palestine, the new occupants are identified with the Philistines of Scripture in the time of the late judges. This view, of necessity, must reject the earlier references to the Philistines in Scripture. Wright would explain this discrepancy by assuming that a later writer was bringing the account up to date in terms of the later occupation.[20]

> . . Another example [of modernizing Scripture] is the mention of the Philistines as living along the southern coast of Palestine. . . . but we now know that the settlement of the Philistines did not occur until five or six hundred years later . . . Later Hebrews were simply bringing the stories up to date, and what modern teller of tales does not do the same?

This explanation falls somewhat short of being convincing, since Scripture gives the very name of the ruling king in this earlier era. This popular view of the origin of the Philistines in Palestine is here summarily rejected, not alone along because of the contradiction with Scripture, but also because of the significant number of anomalies and anachronisms that result from its acceptance. These will now be reviewed.

IV. The New Pottery appearing in the Territory of the Philistines is not of Cretan Origin

It is not the intent here to introduce problems relative to the chronology of Crete. These are considered in another chapter of this work.[21] The archaeology of Crete; however, yields most damaging evidence for the view that these invaders and their culture came from Crete; hence it becomes necessary to refer to one phase of Cretan history. Using the *popularly accepted dates*, the following facts are to be noted.[22] The dates by the proposed revision will be five to six hundred years later.

The sea power and culture of Crete reached its zenith in the period dated c. 1500-1400 B.C. During this century, Crete represented the major sea power of the ancient world, and produced some of the most beautiful and elaborately decorated pottery known anciently.[23] About 1400 B.C. Crete was the victim of an overwhelming catastrophe from which neither its power nor its culture ever recovered. The nature of this catastrophe is still a matter of debate among scholars. Many, including the writer, believe that this disaster was of the nature of a violent earthquake; others think it was due to an invasion by a barbarous people.[24] The evidence indicates that the same culture survived the catastrophe but underwent a steep decline, so that by 1200 B.C. the power and culture of Crete was at its nadir, the residual culture being but a crude remnant of its predecessors.

If the Sea Peoples who invaded Egypt at this time came from Crete under these conditions, then how could they suddenly be in full possession of a high level of pottery culture as indicated by the appearance of this new pottery type in southern Palestine? This new pottery is stated to be on a higher level than that used by the occupants prior to this (as compared to the pottery in the level below it), and on a higher level than that used by the surrounding peoples. The anachronism that results from supposing that this pottery had a Cretan origin was recognized by Baikie who commented:[25]

> . . But the remaining tribes [mentioned in the Egyptian inscriptions] are in all probability Cretans, fragments of the old Minoan Empire which had collapsed two centuries before, and was now gradually becoming disintegrated under the continued pressure from the north. . . . There remain the Pulosathu, who are, almost beyond question, the Philistines, so well known to us from their connection with the rise of the Hebrew monarchy. The Hebrew tradition brought the Philistines from Kaphtor, and Kaphtor is plainly nothing else than the Egyptian Kefti, or Keftiu. In the Philistines, then, we have the last organized remnant of the old Minoan sea-power. Thrown back from the frontier of Egypt by the victory of Rameses III., they established themselves on the maritime plain of Palestine. . . .
>
> But all the same the Philistine was an anachronism, a survival from an older world.

An examination of the new pottery that appeared in Philistia at the time of this attempted invasion of Egypt, and comparison of it with that used in Crete at this time, and prior to this for two centuries, provides no basis for presuming that this new pottery is of Cretan origin. The appearance of a culture on a high level from a people almost devoid of any culture is an anachronism that cannot be so readily dismissed in the evaluation of the popular view of the origin of the Philistines in Palestine.

V. *This New Pottery in Philistia Is of Aegean Origin*

A comparison of this pottery with that of the Aegean area for this and the preceding era leaves no room for doubt on this point. While this pottery found its way to Cyprus and even to the mainland to the north, its origin may be traced unequivocally to the Aegean Islands and the immediate area. Miss Kenyon commented thus on this pottery:[26]

> There is, however, one class of archaeological material which may reasonably be associated with the newcomers. This is a type of pottery entirely new to Palestine [*sic*], decorated with elaborate patterns. The most *characteristic elements in the decoration are metopes enclosing stylized birds, very often with back-turned head,* friezes of spirals, and groups of interlocking semicircles. The form of the vessels and the elements in the decoration all have their origins in the Late Helladic ceramic art of the Aegean. [Emphasis ours.]

But if this pottery is of Aegean origin, and not Cretan then it is most inconsistent to identify the pottery as Philistine on the basis of the Scriptural statements to the effect that the Philistines came from Crete. And if it is not Philistine, then what basis is there for presuming that this pottery provides any evidence at all that this is the date for the first appearance of the Philistines in Palestine? To be sure, it remains possible, though not demonstrated, that this pottery is Philistine of Aegean origin. But if shelter is to be taken under this possibility, then consistency would require that not only the early Scriptural references be rejected, but also the later references which so clearly portray a Cretan origin of the Philistines.[27] It is to be noted that Miss Kenyon recognized the insecurity of the proposed identification of this pottery as Philistine.[28]

> It cannot of course be accepted without question that this pottery is necessarily associated with the Philistines, but the evidence does seem to be strongly in favour of this ascription.

Scholars generally, however, proceed with their deductions on the basis that this identification is altogether above question. The predicament in the archaeology of Shechem is in part due to the acceptance of this identification and of the deductions that naturally follow from it.

VI. The Philistines Could Not Have Made Up More than a Minor Fraction of the Invaders

With the Egyptian lists mentioning some 10 different peoples involved in this attempted invasion of Egypt, it is futile to presume that any one of these made up a major fraction of the total. They were a conglomerate of peoples caught up in a migratory movement who had one aim in common, i.e., that of finding a new place to live. Furthermore, it is not at all improbable that the Philistines who did take part in the invasion were from a previous occupation in southern Palestine. This concept is in agreement with Scripture which indicates an occupation of this territory by the Philistines long before this incident. Since it is known that this migrating people came from the north, and overran the territory of the Hittites before moving further south, they must have made the move southward along the coast and through Philistine territory, or by boat, which some seem to have done. Nothing would be more reasonable that to assume that some of the inhabitants of the Philistine area would join the invasion movement into Egypt. It is rather absurd to presume that a remnant of this one minority group, surviving the abortive invasion attempt, represented what Scripture refers to as the Philistines of the time of Saul and onward, as must be assumed by the popular views. The Philistines at the time of Saul occupied the site of Beth Shan,[29] and it is difficult to see how they could have occupied this site without also occupying the neighboring site of Megiddo. Yet no trace of this pottery was found at Beth Shan and so little at Megiddo that it can hardly be interpreted as representing occupation. The same anachronism is found at other sites where this pottery could be expected to occur by the popular interpretations.[30]

> . . . No evidence of the Philistines, for instance, has been found at Tell DuWeir [Lachish, c. 15 miles south and east of the Philistine site of Askelon] and very little at the neighbouring Tell Hesi, but too much weight cannot at present be given to this suggestion since it is not quite certain whether either site was occuped at this period. Farther north, there is no trace of the typical pottery at Dor, in spite of the fact that there is a literary evidence that it was occupied by the Sakkala, one of the kindred tribes of the Peoples of the Sea. Similarly, there is no trace of it at Tell Abu Hawam, at the foot of Mount Carmel, while, as has already been mentioned, at Megiddo there is a small amount, probably as a result of trade. At Beth-shan, though it was certainly a Philistine city in the 11th century in the time of Saul, there is none at all.

Actually, the archaeological investigations of Philistine sites to date has been so meager that it is not possible even to define the extent of the use of this new pottery type. The primary evidence is from the single site of Askelon.[31] There a single cut was made in the mound, based on the appearance of samples of the pottery fragments appearing on a face of a cliff. The cut revealed a layer of ashes half a meter thick[32] with sherds of the new pottery appearing *above* it. Below the ashes were found remnants of the pottery used by the previous population which exhibited a cosmopolitan origin, consisting of fragments of Mycenaean origin, some of Egyptian origin, and some of Cypriot origin. Most of it appears to have been like that used by the surrounding peoples. Only scattered samples of the *new* pottery have been found in the hill country of southern Palestine.

The Migration of the Philistines from Caphtor Did Not Occur c. 1200 B.C.

The migration of the Philistines from Caphtor mentioned in Scripture occurred much earlier than the invasion of the Sea Peoples, even when erroneously dated six hundred years too early. The incident is mentioned three times in Scripture. The references in Amos 9:7 and Jer. 47:4 indicate that the incident was in the past at the time of writing, but do not give any specific information as to when it occurred. The reference to the incident in connection with the migration of Israel out of Egypt suggests that it was not an event of recent occurrence. A much earlier reference to the incident is found in Deuteronomy 2:23. Moses is reviewing the incidents between the Exodus and the preparation for the crossing of Jordan. After referring to the conquest of the land of Ammon by the descendants of Lot and the occupation of Edom by the descendants of Esau, it is stated that the territory previously occupied by the "Avims" was conquered by the Caphtorims who had migrated from Caphtor.

> And the Avims which dwelt in Hazerim, even unto Azzah, the Caphtorims which came forth out of Caphtor, destroyed them, and dwelt in their stead.

Hazerim of this statement may well be Hazor in the north of Palestine, while Azzah would appear to be Gaza. The territory thus defined is in satisfactory agreement with that occupied by the Biblical Philistines at the time of Saul and during the period of the judges. With the mention in Scripture of Philistines in Palestine from the time of Abraham, the incident of the migration from Caphtor belongs earlier than Abraham. To correlate the *first* occupation of the Philistines in Palestine with the migration of the Sea Peoples is thus a gross and obvious misinterpretation of Scripture. The difficulties in the interpretation of the archaeology of Shechem and of Megiddo can be traced directly to the acceptance of this erroneous concept relative to the Philistines. If one expects to find evidence of the earliest occupation of the Philistines in Palestine, he should look into the archaeology of Early Bronze,[33] not that just preceding Iron I.

VIII. The Culture of the Sea Peoples in the Era of the Late Judges

The problem of tracing the culture of the Sea Peoples backward in time is frought with difficulties, not the least of which is the fact that these peoples may not have had a single culture. On the other hand, the evidences of their intermingling during the course of their history offers some hope of success if we are willing to recognize that we are tracing a general culture of a variety of peoples and not a culture of some single group.

The new pottery found at Askelon at the opening of Iron I, and correlated with the invasion of the Sea Peoples, was identified as of Aegean origin.[34] A similar, but not identical, pottery has been found in the territory north of Palestine belonging to the much earlier era of late middle Bronze.[35] By popular views, this is prior to the Israelite occupation of Palestine. By the altered chronology, this is the period of the late judges and the era of Saul.

The "new pottery" found at Askelon at the beginning of Iron I then belongs to the era c. 700 B.C. and not 1200 B.C., and so also does the incident of the invasion of the Sea peoples. If this pottery had an origin with the Sea Peoples (and this inference seems reasonable enough), then it is a culture of the Sea Peoples of Aegean origin in the era following the fall of Israel to the Assyrians (721 B.C.) At that time, Scripture refers to the encroachments of the Philistines into Israelite territory.[36] As a result of an alliance between the peoples of western Asia and Egypt, Sennacherib of Assyria (705-681) marched his armies into Philistine territory and "punished Askelon."[37] This punishment evidently involved destruction of the city, and this destruction may be recognized as that revealed archaeologically just prior to the occupation of this site by the Sea Peoples.[38] This interpretation accounts also for the further detail that this new pottery found above the destruction at Askelon is rare at Megiddo and entirely missing at Beth Shan. There is no indication that the Philistines occupied this northern territory in 700 B.C.

That the similar pottery of late Middle Bronze, occurring both in the north and in the south, is related to the culture found only in the south at the later date is apparent from the descriptions of the two cultures. Of this earlier culture, which should be dated to the time of Saul, Miss Kenyon commented:[39]

> The pottery does in fact provide very useful evidence about culture. The first interesting point is the wealth of a particular class of painted pottery (fig. 47). The decoration is bichrome, nearly always *red and black*, and the *most typical vessels have a combination of metopes enclosing a bird or a fish* with *geometric decoration* such as a "*Union Jack*" pattern or a Catherine wheel. At Megiddo the first bichrome pottery is attributed to Stratum X, but all the published material comes from tombs intrusive into this level. It is in fact characteristic of Stratum IX. *Similar pottery is found in great profusion in southern Palestine* . . . Very similar vessels are *also found on the east coast of Cyprus and on the coastal Syrian sites as far north as Ras Shamra.* [Emphasis ours.]

Drawings of typical examples of this pottery show the same stylized bird with back-turned head that characterized the pottery centuries later at Askelon.[40] That the pottery is that of the Sea Peoples is evident in both cases. That the invaders of Egypt were not composed in total of the same group as the previous inhabitants south of Palestine is indicated by the newness of the pottery appearing at this time and by the fact that the Egyptian inscriptions refer to some 10 different peoples as included in this invasion.

The anachronisms and anomalies in the current views on the intrepretation of this invasion and its effects on Palestine are replaced by a consistent picture, and one that is in agreement with the background provided by Scripture for the later era in the very late 8th century B.C. or in the very early part of the 7th century. It would seem, however, that the Bible writers did not always clearly distinguish between the various groups composing the so-called Sea Peoples as did the Egyptians.

Further confirmation for the identification of the culture at Megiddo for the earlier era as of Biblical Philistine origin is to be seen in the archaeology of the site of Alalakh. Alalakh was located on the shore of the Mediterranean at its most northeast protrusion. The archaeology of this site makes it possible to trace this culture one step farther back in time.

IX. *The Culture of Level VI at Alalakh Is Related to That of the Philistines*

A series of investigations were carried out by Sir Leonard Woolley (1936-1939) at a site in northern Syria now known as Atchana, but which anciently was known as Alalakh. These investigations revealed seventeen archaeological levels of occupation; the fourteenth (from the top) contained pottery of the Jemdet Nasr type. In a previous chapter;[41] the evidence was noted which correlates this culture of Mesopotamia with the beginning of the dynastic period in both Mesopotamia and Egypt. The culture is thus synchronized with the beginnings of Early Bronze. By the altered chronology, this point marks the beginning of the Dispersion from Babel into the surrounding territories. We thus synchronize Level XIV at Alalakh with the incident of the Dispersion. We find no basis for controversy with Woolley in his synchronizing Levels XIII and XII with the early dynastic period if we do not attempt to be more specific than this. The same may be said with reference to his assignment of Level IX to the era of the Third Dynasty at Ur, this date, by the revision, falling in the approximate era of Joseph of Scripture.[41a]

A solid synchronism is at hand to correlate Level VII at Alalakh with the era of Hammurabi of the First Dynasty at Babylon, whose date by the revision is approximately that of the Conquest. The basis for this synchronism is found in the Mari Letters where it is stated that[42]

> ". . . there are ten or fifteen kings who follow Hammurabi of Babylon and ten or fifteen who follow Rim-sin of Larsa but twenty kings follow Yarim-Lim of Yamkhad."

Investigations at Alalakh revealed numerous tablets inscribed in cuneiform, most of which are by the third of the three kings of the dynasty, Yarim-Lim by name. He was the son of the first king of the dynasty, who had the name Hammurabi, and who is believed to have been the brother of Hammurabi in Babylon. Since the First Dynasty at Babylon was of Amorite origin, then so also was the Yarim-Lim dynasty of Amorite origin.

In the reports by Woolley, he indicates the find at Alalakh of two characteristic pottery types which were designated as "White-Slip milk bowls" and "Base-Ring Ware."

As the digging proceeded downward, he found that such types of pottery were plentiful in Level VI, all but disappeared in Level VII, and then reappeared in all levels from VIII to XVI. Level VII, which did not contain the pottery, was the level containing the inscribed tablets of the Yarim-Lim dynasty. The obvious conclusion was that the people of Yarim-Lim (Amorites) had conquered this city and probably also the surrounding territory, ruling it for a period estimated to have been about 50 years. At the end of this time, the original inhabitants were able to reconquer the site and reoccupy it.

We are interested here in the identity of this people from whom the city of Alalakh was taken and who were able after about 50 years to reoccupy the site. In attempting to identify this people, Woolley recognized difficulties in the background provided by his own interpretation and dating. The royal buildings had been burned so thoroughly that [43]

> . . . even in the core of the thick walls the mud-bricks were bright red and crumbling; the wall plaster, a mixture of mud and lime, had been vitrified and the basalt wall-slabs were not only cracked but in some cases actually melted; it had also been systematically plundered.

The indications pointed to a violent overthrow of the regime, yet only five skeletons were found in the guard chamber and only two others in other rooms. The evidence pointed unmistakably to a surprise attack. The question unanswered was whether the attack had been carried out by a foreign people or by a local rebellion. Neither case seemed to fit the situation, though in choosing between the two improbabilities, Woolley regarded a local rebellion as the least implausible.[44]

> . . . If the military works were garrisoned by "foreign" troops from Aleppo and the eastern provinces of the kingdom, an attack on them would necessarily have followed on the capture of the royal palace, and king Niqme-epuch is not likely to have relied on locally-recruited soldiery. On the other hand the theory of the town's destruction at some time between 1750 and 1730 B.C. [*sic*] by an enemy from outside presents certain difficulties, for Aleppo, the chief city of the kingdom of which Alalakh formed part, continued to enjoy its "great Kingship" long after 1700 B.C. It is true that it was a time of change and of those movements of peoples which every now and then interrupted the history of the Middle East, . . . but we cannot definitely attribute the fall of Niqme-epuch to any such great event. On the whole, a local rebellion seems most plausible . . .

But this theory hardly provides an adequate explanation for the relatively total shift in culture within the city at the time the Yarim-Lim dynasty took over, and the notable revival of this earlier culture following the fall of the dynasty. What then was this culture like that was interrupted for a period of about 50 years by the Yarim-Lim dynasty, and what is the background provided by the altered chronology? We let Woolley tell us about the culture.[45]

> . . . We do indeed know extremely little about the Level VI buildings.
>
> It is to the pottery that we must look for information about Level VI, and the pottery can tell us a good deal. On the one hand we have what I have called the "nationalist rivival" of the traditional *painted ware* which had been suppressed under the late regime, and some examples of this are *perfect replicas of the old* both in form and in decoration, but as time goes on, there appear modifications of the long-established types — instead of the *isolated and static figures of birds or animals* these become active and are combined in running scenes surrounding the whole pot without the *interruption of the triglyph-like partitions* which were once the rule . . . For the first time we get a *polychrome decoration in red and black paint* on a buff surface, and the design includes not only birds but the "*Union Jack*" motive which is *specially characteristic of contemporary Palestine*. . . . [Emphasis ours.]

As one examines this pottery description, he will be struck with the notable similarities of decoration found on the pottery at Megiddo for the era of Philistine occupation in the time of Saul.[46] There is the same use of red and black paint, the similar use of birds as a decoration motif, and the same use of the "Union Jack." If one is willing to grant the cultural relationship between this pottery at Alalakh from Levels XVI to VIII, and again in Level VI, with that in late Middle Bronze at Megiddo, he can do no less than recognize that this characteristic pottery at Alalakh is also that of some branch of the Sea Peoples and that it was this people who were temporarily conquered by the Yarim Lim dynasty. But such an admission is also an admission that some branch of the Sea Peoples occupied this territory long before the Conquest, reaching back into the era which must be recognized as that of the time of Abraham. To be sure, the Philistines of the time of Abraham in Scripture belong to the area of southern Palestine; this is not an anachronism in terms of a people made up of a multiplicity of branches.

In making this identification, it should be noted that we are not saying that this pottery is specifically Philistine. It is only intended to demonstrate that the people who made this pottery, and who were tentatively displaced by the Yarim-Lim dynasty belonged to this group of peoples who, because of their close relationships, have been called the Sea Peoples, of which the Philistines were one branch.

The era of the Yarim-Lim dynasty is the general era of the Exodus-Conquest. It is possible that these Amorites migrated northward as a result of the widespread destruction from natural causes at the time of the Exodus,[47] or the migration may have been the result of the driving of peoples out of Palestine at the time of Joshua. In any case, the evidence now points, not to a local rebellion as surmised by Woolley, but to a conquest by a new people. Since this culture can be traced back to the point of the Dispersion or thereabouts, we may suppose that the Philistines and the Caphtorims of Scripture migrated to Crete prior to the Dispersion and were among those who did not move eastward into Mesopotamia. The writer entertains the probability that what is now the island of Crete was then attatched to the mainland, and this situation may have continued until after these peoples had migrated again to what is now the mainland along the eastern shore of the Mediterranean Sea.

X. *The Sea Peoples of Crete*

With the evidences thus far noted before us, we are now in a position to examine the archaeological reports from Crete for evidences of the early occupation of this site by the Caphtorim (who are either identical to the Philistines of later Scripture or are closely related to them culturally). We now have at least an approximate idea of the nature of the culture for which we are looking, since the culture at Alalakh can be traced, with modifications, back to the point of the Dispersion.

While it has not been possible to correlate the early Archaeological Ages in Crete with those in Palestine with any degree of precision, we can hardly be wrong in recognizing the *earliest occupants* of Crete as the people who represented the beginnings of the people later known in Scripture as the Philistines, by virtue of the stated origin of the Philistines in Crete. This concept holds regardless of the name that may be applied to this early era by scholars.

The only site at which Cretan archaeology has been examined for its earliest occupants is at the site of the palace at Knosos.[48] At this site deep test pits were dug into the earlier occupation levels. If there is any archaeological evidence available from Crete for this earliest period, it should then be found from the archaeology of these test pits. The pottery found there is described by Dr. Furness, who is cited by Hutchinson.[49]

> "Dr. Furness divides the Early Neolithic I fabrics into (a) coarse unburnished ware and (b) fine burnished ware, only differing from the former in that the pot walls are thinner, the clay better mixed, and the burnish more carefully executed. The surface colour is usually black, but examples also occur of red, buff or yellow, sometimes brilliant red or orange, and sometimes highly variegated sherds."

A relation was observed between the decoration of some of this pottery from early Neolithic I in Crete with that at the site of Alalakh, though the observations was interpreted inversely, i.e., that the similarity was due to an influence of the Alalakh culture on that of Crete. Continuing to cite Dr. Furness, Hutchinson commented:[50]

> Dr. Furness justly observes that "as the pottery of the late Neolithic phases seems to have developed at Knosos without a break, it is to the earliest that one must look for evidence of origin of foreign connections," and she therefore stresses the importance of a small group with plastic decoration that seems mainly confined to the *Early Neolithic I levels*, consisting of rows of pellets immediately under the rim (paralleled on *burnished pottery of Chalcolithic* [predynastic] *date from Gullucek in the Alaca* [Alalakh] *district of Asia Minor*). [Emphasis ours.]

While the Archaeological Ages of early Crete cannot with certainty be correlated with the corresponding eras on the mainland, it would seem that Chalcolithic on the mainland is later than Early Neolithic in Crete; hence any influence of one culture on the other is more probably an influence of early Cretan culture on that of the mainland. This is in agreement with Scripture to the effect that the Philistines migrated from Crete to what is now the mainland at some point prior to the time of Abraham.

The problem of the origin of the Philistines was discussed as a topic of the Schweich Lectures in 1911 by Macalister. In the absence of later treatises on the subject, this material was reprinted in 1965 to make it more readily available to scholars. While Macalister recognized the data presumed to be adverse to a Cretan origin, it was his unequivocal conclusion that this origin was as near a certainty as was possible to attain.[51]

Notes and References

(1) Jer. 47:4. (2) See quot. of ref. 25. (3) Gen. 10:13, 14. (4) Gen. 21:32-34. (5) Ex. 13:17. (6) Josh. 13:2,3. (7) Jdg. 3:31. (8) Jdg. 13:1. (9) I Sam. 7:14; II Kings 18:8; II Chron. 28:18. (10) I Sam. 7:14. (11) II Sam. 5:25. (12) II Chron. 26:6, 7. (13) II Kings 18:8. (14) I Sam. 31:8-10. (15) II Chron. 28:18. (16) L-ARAB, Vol. I, pars. 801, 815; Vol. II, par. 55. (17) Jer. 47:4; Eze. 25:15, 16. (18) Jer. 47:1-5; 46:2. (19) P-HE, Vol. III, pp. 150ff. (20) W-BA, p. 40. (21) Chap. VI, Sect. II. (22) H-PC, Chap. XI. (23) *Ibid.*, pp. 172, 185, gives reproductions of designs of Cretan pottery of Middle Minoan; see also Plate 18 (following p. 192). (24) *Ibid.*, pp. 300ff.; see ref. 21. (25) B-SKC, pp. 166, 169. (26) K-AHL, p. 223. (27) See Sect. VII for texts. (28) K-AHL, p. 224. (29) I Sam. 31:11, 12. (30) K-AHL, p. 231. (31) *Ibid.*, p. 224. (32) *Ibid.* (33) See Table III. (34) See quot. of ref. 26. (35) See drawing, K-AHL, p. 199 showing decoration motif of bird with back-turned head. (36) See ref. 15. (37) B-HE, p. 551. (38) See ref. 28. (39) K-AHL, p. 200. (40) See note 35. (41) Chap. VII. (41a) See Fig. 5. (42) Cited in W-FK, p. 65. (43) *Ibid.*, p. 80. (44) *Ibid.*, p. 81. (45) *Ibid.*, p. 86. (46) See quot. of ref. 39. (47) Chap. VI, Sects. VII, VIII. (48) H-PC, p. 46. (49) *Ibid.*, p. 47. (50) *Ibid.* (51) M-P, pp. 9, 10.

CHAPTER XIV

PROBLEMS IN THE ARCHAEOLOGY OF HAZOR

In the light of the obvious difficulties in the interpretation of the archaeology of Jericho and of Ai, and the coincident solutions which result from a redating of the end of Early Bronze, the question was directed to a prominent authority in the field of Biblical Archaeology as to why no consideration had been given to the possibility that the difficulties lay in misdating the debris layers in Palestine mounds rather than in Biblical errors or unreliability of the Scriptural accounts. In reply to this question, it was freely admitted that such an approach might provide solutions to the difficulties at Jericho and at Ai, but that this was not the case at Biblical Hazor. It thus becomes of interest to take another look at the archaeology of Hazor to determine whether the popular interpretations of the archaeology of the site are as conclusive as a support for popular opinion as has been assumed.

I. Hazor in the Biblical Accounts

The history of Hazor provides us with certain basic information which may serve in arriving at correct dates for Palestinian chronology. Hazor is first mentioned during the early years of the conquest of Canaan by Joshua. When the king of Hazor heard of the victories of the Israelites, he allied himself with a number of neighboring kings, and Joshua met the united armies in battle.[1]

> And Joshua at that time turned back, and took Hazor, and smote the king thereof with the sword: for Hazor before time was the head of all those kingdoms. And they smote all the souls that were therein with the edge of the sword, utterly destroying them: there was not any left to breath: and he burnt Hazor with fire.

The next mention of Hazor is in the days of the early Judges. Israel had been taken captive by Jabin, king of Canaan, then reigning from the city of Hazor.[2] Obviously the city must have been rebuilt after the destruction by Joshua and subsequently lost to the Israelites, necessitating a reconquest at the time of Deborah and Barak. It is not stated in Scripture what the fate of the city was at that time. Josephus states that the city was overthrown to its foundations.[3]

Hazor is next mentioned in the days of Solomon, at which time the city was rebuilt. This may have been from a delapidated condition, since more than four centuries had elapsed since the reconquest under Deborah and Barak. Toward the end of the history of the northern kingdom of Israel in the days of Pekah, Tiglathpileser (732 B.C.) captured the city and carried its inhabitants capitve to Assyria.[4] Again, it is not stated what the fate of the city was at that time. Since the city was destroyed at the time of Nebuchadnezzar some 150 years later, it must be assumed that the city was spared by Tiglathpileser or else that it was rebuilt before the time of Nebuchadnezzar. The detail of the destruction by Nebuchadnezzar is not given as an historical account. However, the prophet Jeremiah prophecied of its destruction in these words:[5]

> Concerning Kedar and concerning the kingdoms of Hazor, which Nebuchadnezzar king of Babylon shall smite, thus saith the Lord. . . . And Hazor shall be a dwelling for dragons, and desolation forever: there shall no man abide there, nor any son of man dwell in it.

We may thus sum up the known history of Hazor as far as incidents which might be verified by archaeological observation. (1) It was a very important city in northern Palestine before the time of Joshua; (2) Joshua conquered the city and burned it with fire; (3) Israel lost the city to the Canaanites, and a second conquest was necessary in the days of Deborah and Barak. Hence the city must have been rebuilt after the destruction by Joshua. If we may accept the statements of Josephus, the city was destroyed to its foundations at that time; (4) the city was rebuilt in the days of Solomon, possibly from a grossly deteriorated condition; (5) the city was captured by Tiglathpileser (c. 732 B.C.), the fate of the city being unknown; (6) the city met a total and final destruction by Nebuchadnezzar in the 7th century B.C.

II. Archaeological Investigations at Hazor by Garstang

Garstang began archaeologcal investigations on the site of ancient Hazor in 1928 with the explicit purpose of attempting to find data which would aid in the establishment of the data for the Exodus and the Conquest. Garstang's results were not published in detail. It was, however, his immovable conclusion that the history of the large city had come to its final end during the era of the 14th century B.C.[6] This conclusion was at variance with the more popular placement of the Exodus in the XIXth Dynasty (13th century B.C.). The discrepancy was not large, but too large to ignore. The conclusion of Garstang seems to have been based primarily on the apparent absence of so-called Mykenean type pottery on the Hazor site. This type of pottery is considered to have been first imported into Palestine from Greece sometime after 1400 B.C. and to have ceased about one and one-half centuries later.

III. Later Investigations on the Plateau Enclosure at Hazor

The excavations of the Hazor site were resumed by Yadin and his staff in 1955 and continued through four seasons.[7] Excavations were made at several locations on the site, but, for purposes of the present discussion, these may be reduced to two more general areas. One of these was on the mound proper; the other was on the extensive plateau enclosure to the adjacent area north of the mound and at a somewhat lower level than the mound itself. The history of the two areas, as revealed by the archaeology of the site, was not the same for the two areas. The investigations were made with the specific aim of proving or disproving the conclusion of Garstang which was so definitely out of line with the traditional placement of the Conquest in the 13th century. These investigators found that the debris just one meter below the surface over the area of the plateau enclosure showed the remains of well-built homes with drainage systems, and that the city was *abundantly* represented by Mykenean type pottery. Since this type pottery had been dated to the era c. 1400-1250 B.C., it was concluded that this city must be similarly dated and hence represented the city destroyed by Joshua. Since the city must be given a reasonable period of existence prior to its destruction, a date in the 13th century was deduced, contrary to the conclusion reached by Garstang.

Beneath the ruins of this city were found the remains of several earlier cities reaching back into the era of Middle Bronze II (the Hyksos era), the lowest one having been "efficiently destroyed by fire."[8] Yadin commented on this series of cities found on the plateau enclosure.[9]

> . . . Firstly, it appeared that the whole area, just one meter below the surface, was occupied by a well-built city with houses and drainage systems. Secondly — and to our surprise — we found the floors of these houses littered with Mykenean pottery as well as many other vessels and objects of local make, all dating back to the late phase of the Late Bronze Age, i.e., the 13th century B.C.! In other words here was definite proof [*sic*] that the last city in the big enclosure met its end about the same time as the actual conquest of the country by Joshua, according to the date given by most scholars. . . . Another important conclusion from this area is the fact that below the stratum of the 13th century B.C., we discovered several layers containing earlier cities ranging from Middle Bronze II (the so-called Hyksos period of the 16th and 17th centuries) down to the Late Bronze I in the 15th century. . . .

IV. Yadin's Interpretation of the Archaeology of the Plateau Enclosure

The upper city with its well-built houses and drainage systems was identified as that destroyed by the Israelites under Joshua and must then be credited to a Canaanite origin. Assuming that the era of the Mykenean type pottery has been correctly dated at c. 1400-1250, this is a logical deduction from the standpoint of dating, and if supportable would virtually eliminate from further consideration the XVIIIth Dynasty background for the Conquest. However, the correctness of this dating of the Mykenean era is here challenged, along with the date assigned in the interpretation of Palestinian archaeology as a whole. No mention was made in the reports that this city was destroyed by fire, as stated in the Biblical account, and since efficient destruction by fire is stated for the lowest city in the enclosure,[9a] we assume that such evidence was missing in the ruins of the upper city. If so, then this city does not meet the specifications of the Biblical account for the destruction by the Israelites; even if this city was destroyed by burning, this does not prove that it was the city destroyed by the Israelites. The two cities below were also credited to the Canaanites and, from the associated pottery, were dated from the Hyksos era, ending c. 1580 B.C. by current views. If Yadin is correct in his assignment of these two lower cities to the Hyksos era, then the proposal[10] to recognize either of these cities as that destroyed by the Israelites in terms of a Conquest set in the era c. 1400 B.C. is out of the question.

V. *A Variant Interpretation of the Archaeology of the Cities Found in the Plateau Enclosure*

The assignment of the city with well-built homes and drainage systems to the Canaanites may be taken as quite the same sort of error that has been made in presuming, on the basis of current correlations of Palestine levels with the B.C. time scale, that it was the cultural level in Palestine at the time of the entrance of the Israelites that dropped precipitously, [10a] the Canaanites having had a cultural level never attained by the incoming Israelites. When the archaeology of the site has been correctly correlated with true Palestinian history, the reverse is true. By the proposed revision, the Mykenean period belongs to the era c. 950-800 B.C., and the upper city is then that built by Solomon. Its destruction is then that by Tiglathpileser c. 732 B.C. The lower cities are then from the pre-Solomonic era, and, granting the assignment to the Hyksos era as correct, these belong to the era of the Judges.

It is tempting to identify the lowest city on the plateau enclosure, which was "efficiently destroyed by fire," as that destroyed by Joshua to meet the Scriptural account of such destruction. However, if this city has been correctly placed in the scheme of the Archaeological Ages, there are difficulties in such an identification. The pottery associated with this burned city is stated to belong to Middle Bronze II; the destruction by Joshua, on the other hand, should be associated with pottery from late Early Bronze. However, the possibility of misdating the associated pottery is not necessary eliminated in view of the necessary redating of the pottery in association with the fallen walls at Jericho, even after many decades of previous investigations on the site. There is also the necessary redating of the pottery in association with the massive temple at Shechem in the light of subsequent investigations. In the absence of such evidence at the present time, the city levels at Hazor are here tentatively interpreted in line with the reports, but against the background provided by the altered chronological structure.

It follows from such an interpretation that the constructions on the plateau enclosure belong to the post-Conquest era in total. If there are any evidences to be found at Hazor for the incident of the Conquest, these must be found on the mound proper.

VI. The Archaeology of the Mound Site

Investigations were carried out at several points on the mound site. With the fourth season of investigation, an attempt was made to trace the history of the site from its beginnings to the Hellenistic era.[10b] The evidence pointed to a sequence of 21 cities during this period. At no single area of the mound was the evidence for the entire series observed. However, by correlation of the levels at the various areas (particularly those designated A and B), such a sequence could be reasonably established.

The assignments of dates were made on the basis of the accepted dates for the various pottery types of the "pottery dating sequence." Some specific finds were made which apparently confirmed the general correctness of these assignments. However, as has been previously noted, this dating scheme provides only relative dates, except as unequivocal dates can be assigned to these various pottery types.[11] It is the validity of these assigned dates that is here challenged. Since this is the case, there would be little gained by challenging each of the identifications individually.

VII. An Altered Identification of the 21 Cities at Hazor

A reinterpretation of the critical phases of the series of cities at Hazor in terms of the revised chronology may be attained by the following reasoning. As we proceed, evidences for the general correctness of this altered interpretation will appear.

A readily recognizable pottery type known as Khirbet Kerak ware appears in the cities designated as XX and XIX of the series discovered on the mound site,[12] as distinguished from the plateau enclosure. This same type pottery has also been found far to the north of Hazor at the site of Tabara.[13] This pottery appeared as a "new type" in Level IV of the seven levels found on the Tabara site and continued into Level I. The upper levels at Tabara were followed by the lower levels at the near-by site of Alalakh (Atchana), with only sufficient evidences from the upper level at Tabara to establish the sequence of occupation of the two sites. The third level from the bottom at Alalakh has pottery of the *Jemdet Nasr* type from Mesopotamia,[14] and represents the point of the Dispersion as noted in a previous chapter.[15] Hence the Khirbet Kerak ware in this northern area, now found at more than 50 sites,[16] belongs to the immediate predynastic period. Its presence through four successive levels at Tabara was taken to indicate that the pottery had a long life in this area.[17]

The same pottery appears later at a number of sites in northern Palestine, including Hazor,[18] where it appears suddenly with no previous history in this area and hence represents an incursion of a new people from this northern area into the Hazor area [18a]

> . . . In Palestine it [Khirbet Kerak Ware] has been found on a number of sites. It appears fully developed and has no previous history in that country; generally it occurs immediately above a stratum, the buildings of which have been destroyed by fire. . . .

This unusual circumstance of a general appearance above evidences of burning is capable of a variety of interpretations. It has been assumed that these destructions *by fire* were at the hands of the Kherbit Kerak people who slaughtered the population in total, burned their cities, and took over the city sites.[19] However, as noted in a previous chapter,[20] a general destruction of cities by burning resulted at the time of the widespread evidences of disaster in this area by earthquake, as described by Schaeffer. Schaeffer dated two such catastrophes at c. 2400 and c. 2200 B.C.[21] By the proposed revision, these two catastrophes occurred at the time of the Exodus and of the Conquest repectively, and the period between the two was only 40 years, not 200 years.[22]

We would thus identify this general burning of cities in this area at this time with the unusual phenomena that occurred at the time of the Exodus, the Scriptural account mentioning the strange phenomenon of *hail mingled with fire.*[22a] There is no reason to believe that these manifestations were limited to the area of Egypt, since the evidences of the catastrophe reach from the island of Crete, through Greece, Anatolia, Syria, Palestine, and into Egypt.

By this interpretation, the Kherbit Kerak people were among those who migrated from the north into this more southern territory following the first of these two catastrophes.[23] Since their pottery appears at Hazor as a new type in City XX and extends into City XIX of the Hazor mound, these two cities belong to the interval between the Exodus and the Conquest, and the evidences of the Conquest should be sought between City XIX and City XVIII. The general correctness of this interpretation is confirmed by the logical identifications of the subsequent cities in terms of the positions assigned in the Archaeological Ages and from the accounts of finds in the various cities in the reports of Yadin.[23a] City XVIII is said to be uniquely characterized by the presence of an abundance of pottery, but no buildings.[24] It will be recalled that this same situation existed at the Jericho site following the incursion of the Israelites, and was interpreted to represent the camp of the Israelites during the period of conquest.[25] Evidently, the armies of Israel also occupied the Hazor site, after its destruction, as a temporary camp during the period of the conquest of this northern territory.

Cities XVII and XVI belong to Middle Bronze II and are thus to be correlated with cities IV and III in the plateau enclosure. By the revision, this is the period of the judges. City XVII may then represent the first occupation by the Israelites after the Conquest, and city XVI that reoccupied by the Canaanites.[25a] City XV was that reoccupied by the Israelites after the reconquest.[25b] City XV was correlated with Level II in the plateau enclosure.[26] Since city III on the plateau was "efficiently burned with fire," this city probably coincided with the era of City XVI on the mound proper. The date, however, is not in the 16th century, but in the 14th century.

City XIV was from the Amarna Age.[27] By the revision, the date is in the mid-9th century.[28] Hence, there was a long gap in the occupation of the mound site from the era of the late judges until the 9th century. This period encompasses the era of Solomon, to whom we have credited the building of City I in the plateau enclosure. The picture now comes into focus. When Solomon built the city of Hazor, this was not a building of the city located on the mound; it was a rebuilding of the city on the plateau, which probably represented the principal site of occupation by the Israelites from the time of their first occupation.

During the period of the use of Solomon's city, the mound area was virtually uninhabited.

Solomon's city was the one that was destroyed by Tiglathpileser, c. 732 B.C. The debris one meter deep, above the ruins of Solomon's city on the plateau, represents the total occupation of this area subsequent to this Assyrian conquest. This debris was not described by the investigators by levels.

On the mound site, the era from Solomon to the Amarna period is represented by the virtual hiatus of occupation between Cities XV and XIV. Level III on the mound was described as of notably poorer culture.[29] This would agree with the situation following the Assyrian conquest when the more well-to-do and the more capable had been removed from the territory and replaced by foreigners.[30] While Levels X to VIII were described as "thin" and not even represented in Area A,[31] Cities VII to X were, nevertheless, attributed to the era of Solomon on the basis of the presence of a casemate wall, this type having been attributed to him at other locations.[32] We have assigned an Assyrian origin to all of these casemate walls; the similarity of construction may point to a common origin, but it does not follow *per se* that this origin was by Solomon. Levels I to VII all belong to Iron I or later, and, by the revision, all belong to to the Assyrian period or later. The thin layers of Levels VIII to XI would then be relatable to the century following the Amarna period.

The earlier date for these top levels (in contrast to the dates assigned by Yadin) is confirmed by the appearance in Level VI of column capitals of "proto-Aeolic" or "ionic" style. This type capital belongs to the 6th century, not to the 9th. We may assume that it was this awkward situation that led Yadin to refer to the capitals as *proto*-Aeolic. The writer finds no basis whatever for assigning dates this early to this type of architectural decoration.[33]

> The early Ionic style, in the middle and later sixth century, is much less uniform than the Doric. . . .

The terrific destruction of the citadel in Area B below the Persian citadel was clearly the result of an enemy attack and not an earthquake.[34] It should be attributed to the destruction by Nebuchadnezzar in the 7th century, and not to the era of Pekah and the destruction by Tiglathpileser. The inscription LPQH[35] could refer to a person by the name Pekah, though this is not necessarily the case, and even if provable, this would not establish that this Pekah was of the Israelite line of kings. The evidence of earthquake in Level III is then not that of the time of Jeroboam II and Uzziah; it is much later than that. The same sort of insecurity characterizes the inscription YRB as the equivalent of Jeroboam in Level III. This YRB is the son of Elmatan;[36] Jeroboam II was the son of Joash.[37] Granting the reading of YRB as Jeroboam, this is not king Jeroboam under any circumstance, and the name provides no basis for dating City III to the time of Jeroboam.

Notes and References

(1) Josh. 11:10, 11. (2) Jdg. 4:2. (3) J-AJ, Bk. V, Chap. V, par. 4. (4) See ref. 29. (5) Jer. 49:28. (6) Cited in BA, Vol. XIX, p. 5. (7) *Ibid.*, p. 6. (8) *Ibid*, Vol. XX, p. 44. (9) *Ibid.*, Vol. XIX, pp. 9, 10. (9a) *Ibid.* (10) H-RPIB, p. 31. (10a) Vol. I, Chap. VIII, Sect. I. (10b) BA, Vol. XXII. (11) K-AHL, p. 32. (12) BA, Vol. XXII, p. 18. (13) W-FK, pp. 31, 34, 35. (14) *Ibid.* (15) Chap. VII. (16) W-FK, p. 32. (17) *Ibid.* (18) W-FK, p. 31. (18a) See ref. 12. (19) *Ibid.* (20) Chap. VI, Sect. VIII. (21) *Ibid.*, Sects. VII, VIII. (22) *Ibid.* (22a) See quot. of ref. 28, Vol. I, Chap. IX. (23) See ref. 21. (23a) See ref. 10b. (24) See ref. 12. (25) Vol. I, Chap. VI, Sect. VII. (25a) Josh. 11:10, 11. (25b) Jdg. 4:2. (26) BA, Vol. XXII, p. 17. (27) *Ibid.*, p. 14. (28) Vol. I, Chap. XVI, Sect. XI; Vol. II, Chap. XVII, Sects. XIV-XVI. (29) BA, Vol. XXII, p. 14. (30) II Kings 15:29; 16:4-6. (31) BA, Vol. XXII, p. 12. (32) i.e., at Megiddo and Gezer. None of these casemate walls are labelled for such an identification. They are so identified by the demands of the accepted chronology. It cannot be assumed that Solomon was the only person in over half a millennium who was capable of making such a structure. By the revision, these are of Assyrian origin, as indicated by their appearance at sites outside Palestine. (33) C-GUA, p. 112. (34) BA, Vol. XX, p. 37. (35) *Ibid.*, p. 40. (36) See ref. 34. (37) II Kings 14:27.

CHAPTER XV

TRANSJORDAN AND THE NEGEB

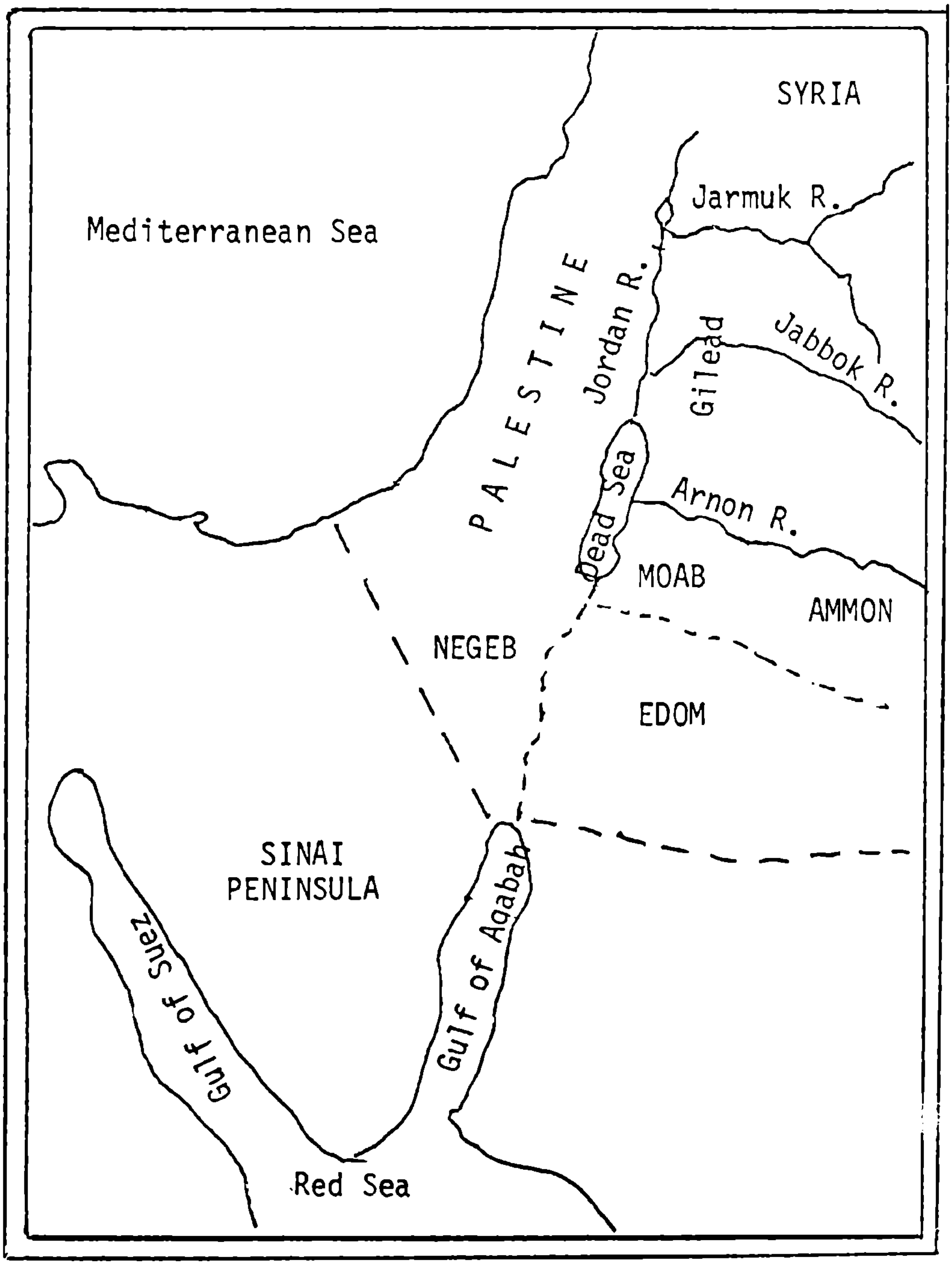
As the name implies, Transjordan is the territory east of the River Jordan, not commonly included in the term Palestine.[1] Its northern limit is the River Yarmuk and the southern limit an ill-defined line running eastward from the northern tip of the Gulf of Aqabah, which is the eastern arm of the Red Sea. The Jordan River ends with the Dead Sea. This sea may be considered as a below-sea-level prolongation of the geological fault through which the Jordan River flows. This fault continues from the southern end of the Dead Sea to the Gulf of Aqabah in what is known as the Wadi el-Arabah, which forms the eastern boundary of the Negeb and the western boundary of the ancient territory of Edom. That part of Transjordan directly east of the Dead Sea comprised the territory of ancient Moab, while the Amorites occupied the fertile area to the east of the River Jordan proper. This area approximates that known in Scripture as the Land of Gilead which became the inheritance of the tribes of Gad and the half tribe of Manasseh.

As one travels eastward from the fault embodying the Sea of Galilee, the River Jordan, the Dead Sea and the Wadi el-Arabah, the land becomes increasingly desert. The Ammonities occupied territory in this more desert region east of Moab. The area between the two arms of the Red Sea is known as the Sinai Peninsula. This region extends northward to meet the Mediterranean Sea, the rainfall increasing somewhat as one proceeds northward, though the territory continues to be semidesert. The Negeb is the V-shaped section between the Sinai territory and the western border of Edom as marked by the Wadi el-Arabah.

The history of Transjordan and the Negeb is quite different from that of Palestine. This is particularly true of the territories of the Ammonites, the Moabites, and the Edomites; the differences, however, carry over also into the territories of the Amorites and the Negeb. Glueck may be logical in regarding the Negeb as part of Palestine, but because of the differences historically and archaeologically, it is deemed desirable here to treat these areas separately.

Figure 3

Palestine-Transjordan-Sinai Area



1. The Edomites

The Edomites were the descendants of Esau, twin brother of Jacob, father of the Israelites. The development of the Edomite people was thus contemporaneous with that of the Israelites. At the time the Israelites approached the land of promise, a request was lodged with the king of Edom to pass through his territory peaceably.[2] This request was denied. Since the Edomites were kinsmen of the Israelites, they were not permitted to attempt this passage by force, and were obliged to skirt the territory of Edom on the east along the border of the desert.[2a] Since the Edomites had a king over them at this time, an organized people is indicated who were able, if necessary, to resist such passage. Since local areas were under the sub-rule of dukes,[3] the existence of cities as the units of such local government can hardly be denied. While cities in Edom are not specifically named in Scripture, the existence of such is confirmed by mention of specific cities in the adjoining area of Moab.[4]

Some three and one-half centuries after the Conquest, king Saul warred with the Edomites,[5] but there is no indication of Israelite occupation of Edomite territory at this time. Saul's wars were designed to free Israel from any further interference by those peoples who had proved to be their enemies during the period of the judges. In the reign of David, Edom was made a tributary of Israel and garrisons were placed throughout the area.[6] Neither was the territory occupied by the Israelites at this time. This arrangement, initiated by David, still existed at the time of Jehosaphat (872-848 B.C.), since at that time the territory was still ruled by a deputy.[7] It was not until the reign of Joram (852-841 B.C.) that Edom again became strong enough to revolt from Judah.[8] Jeremiah[9] and Ezekiel[10] prophecied of the destruction of Edom and Moab, thus indicating a continuance of this people into the 6th century.

It may be inferred that Assyria had some degree of control over Edom in the years that followed the fall of the northern kingdom of Israel. Some further control by Syria is indicated by the recorded "recovery" of Elath on the Red Sea from the Jews in the reign of Pekah, one of the last kings of the northern kingdom of Israel.[11] The history of Edom becomes of fundamental importance in arriving at a proper interpretation of the archaeology of the territory of the Edomites.

II. The Moabites

The Moabites were the descendants of Lot through his older daughter.[12] As with the Edomites, so it was with the Moabites; the migrating Israelites were obliged to skirt their territory on the east along the fringe of the desert.[13] At this time, Balak was king of the Moabites. A number of city names appear in the Scriptural account indicating a sedentary population at the time of the Conquest.[14] Prior to the Israelite passage, the northern section of Moabite territory, as far south as the River Arnon, had been wrested from the Moabites by the Amorites, who occupied the territory to the north.[15] The passage of the Israelites westward from the desert region into Palestine was through this territory formerly Moabite, but then controlled by the Amorites. This territory later became the inheritance of the tribe of Reuben.

Under the judgeship of Ehud, the Israelites won a notable battle against the Moabites,[16] but there was no attempt at that time to invade or occupy the territory. The independence of Moab continued into the era of Ruth. At least this is strongly inferred by the selection of Moabite wives, rather than Israelite wives, by the sons of Naomi.[17] Ruth married Boaz who, through this marriage, became the great grandfather of David.[18] The time is thus that of the late judges.

Saul fought against Moab as he did against Edom,[19] and David conquered Moab, destroying many of the inhabitants and placing the others under servitude as he had done with the Edomites.[20] In neither case was the territory of Moab occupied by the Israelites. The tributary status of Moab continued until after the time of Ahab when the Moabites rebelled against Israel[21] (c. 850 B.C.). The Moabites also became the object of prophetic destruction.

III. The Ammonites

The Ammonites were the descendants of Lot through his younger daughter.[22] While the relations between the Ammonites and the Israelites are repeatedly referred to in Scripture,[23] so little is known archaeologically about the

Ammonites that the incidents involved are not such as to be relatable to archaeological observations. Thus while their history is interesting, any further consideration is omitted here.

IV. The Amorites

The origin and early history of the Amorites is obscure. It appears from Scriptural references that many of the peoples occupying territory *west* of Jordan were of Amorite origin. This would seem to be the inference in the statement of Ezekiel[24] in ascribing to Jerusalem an Amorite father. The Gibeonites are stated to have been Amorites.[25] In the promise of later inheritance of this land, the occupants are referred to as Amorites.[26] Thus while Sihon, king of the Amorites of the Conquest story, has his capital at Heshbon[27] in territory taken from the Moabites, it would appear that a number of the peoples on the west of Jordan were branches of the Amorites. This concept is further confirmed by the fact that the pottery of Early Bronze is the same on both sides of Jordan, particularly in the north.

Interest here is in the Amorites who occupied the territories on the east of Jordan, a territory that became the inheritance of the two and one-half tribes. This entire territory occupied by the Amorites in Transjordan was conquered by the Israelites prior to the crossing of Jordan. At this time, the cities of the area were destroyed, sixty of which were walled cities,[28] a destruction that should be readily observable archaeologically.

V. The Negeb

The various texts in Scripture which refer to the territory to the south of Palestine identify it as the "south" or the "south country." The word in the Hebrew is *negeb*, and these references may be traced in *Young's Analytical Concordance* by means of this term. Interest here is primarily with reference to the peoples who are said to have occupied this territory. From such references, it is apparent that this was the home of the Amalekites[29], of the Canaanites,[30] of the Jeremeelites,[31] of the Kenites,[32] of the Cherethites,[33] of the Calebites[34] and certain of the tribe of Judah.[35] It is also clear from Scripture that this area of the Negeb was part of the land promised to the Israelites,[36] supporting the contention of Glueck that the Negeb should be considered as part of Palestine.

This territory is of interest from the standpoint of its traversal by Abraham and his cattle at the time of the famine shortly after his arrival in Canaan from the east.[37] At this time Abraham was very rich in cattle which he must have taken with him into Egypt and again on his return.[38] The reference has been queried on the basis of the difficulties that would be encountered in traversing this arid region with large herds of cattle.[39] It was in this area also that the Israelites spent most of their 40 years of wandering prior to the Conquest. Following the Conquest, certain tribes related to the Israelites elected to live in this area.[40] It is on this basis that Glueck has considered the Negeb as part of Palestine.

Archaeology reveals that the area was populated by a people in Middle Bronze I who had mastered the problem of a water supply.[41] It was populated again centuries later by the Nabataeans.[42]

VI. Current Views on the Interpretation of Archaeology in Transjordan and the Negeb

Much of the archaeological investigation in these areas has been done by Glueck and by Albright. Because of the unfavorable climate (and perhaps lack of adequate funds), the efforts have been largely confined to surface examination. On the basis of such a cursory examination of the areas, Glueck came to the conclusion that there had been two, and only two, eras of sedentary occupation of Transjordan in historical times. The first of these was the Early Bronze civilization, assumed by Glueck to have ended with the end of the Early Bronze Age west of Jordan. The second began with the beginning of the Iron Age. It was presumed that between these two, a gap in sedentary occupation encompassed the entire periods of Middle and Late Bronze. By current views, this is the period from about the time of Abraham to the beginning of the Israelite monarchy.[43]

> For the present, it has been possible to establish the presence of two outstanding civilizations in the explored part of Transjordan during its early history. The one is the early Bronze Age civilization. The other is the Iron Age civilization. Between these there was a gap in the history of permanent sedentary occupation, lasting from about the end of the

20th to the beginning of the 13th century B.C., another gap extended from about the end of the 6th to the beginning of the 3rd century.

While the investigations represented only a surface examination of the pottery types to be found by traversing this area from end to end, Glueck defended his conclusions as above question on the basis that it was possible to arrive at similar conclusions, relative to the limits of occupation, by examination of the pottery sherds to be found by walking up and down the sides of a mound site, without actual excavation of the mound. To illustrate this claim, he referred to the case of the examination of the mound of Tell Beit Mirsim by Albright.[44]

> A number of years ago, while undertaking an archaeological survey-expedition through southern Palestine, William F. Albright came across an ancient mound, mentioned above, called Tell Beit Mirsim. Climbing up and down the slopes of the mound, he collected hundreds of fragments of pottery which belonged to all the layers of ruined villages contained within it, and on the basis of these surface finds alone came to the conclusions that the site had been inhabited from about 2000 to about 600 B.C. Thereafter, commencing in 1928, four successive years of excavations were carried out there under his direction. On the basis of the great quantity of archaeological materials of all kinds obtained in the long and wearisome and most carefully conducted excavations, Albright came to the conclusion that his first estimate of the total history of the occupation of the site was mistaken. No, Tell Beit Mirsim had not been inhabited from 2000 to 600 B.C. It had been inhabited from 2200 to 586 B.C. In other words, the conclusions he had arrived at on the basis of mere surface pottery finds were in general completely corroborated by the results of the actual excavations. They were merely made more exact.

Since the pottery found in Transjordan, and belonging to the Early Bronze civilization, was quite the same as that found west of Jordan for the same period (particularly in the north), it was concluded that this Early Bronze civilization represented a group of peoples sufficiently closely related to have used a common type of pottery.[45] This conclusion is in agreement with Scripture which pictures the Amorites as occupying territory on both sides of Jordan. The conclusion must, of course, be qualified to recognize locally different cultures in Palestine such as the distinctive Khirbet Karak ware found near the Sea of Galilee. By the same token, the limitations of the investigations in Transjordan must leave room for the possible presence of similar locally used types not as yet discovered.

The widespread destruction observed at the end of Early Bronze was, by this view, considered as that which resulted from the conquest of Transjordan by Chedorlaomer and his allies, as recorded in Genesis 14.[46]

The situation in the Negeb was found to be quite different. The evidences of a sedentary occupation there belonged to Middle Bronze I, with no evidence of such occupation in Early Bronze. Believing that it would have been impossible for Abraham to have traversed the territory from Palestine to Egypt across the Negeb with his cattle and possessions at a time when the problem of water had not been solved by a sedentary occupancy of the area, Glueck concluded that Abraham's journey to Egypt, to escape famine in Palestine, must belong to the era of Middle Bronze I.[47]

> . . . Either the Age of Abraham coincides with the Middle Bronze I period between the twenty-first and nineteenth centuries B.C. or the entire saga dealing with the Patriarch must be dismissed, so far as its historical value is concerned, from sicentific considerations.

A further problem related to the interpretation of the archaeology of Transjordan has been called to the attention of scholars by Glueck. The refusal of the Edomites and the Moabites to grant the request of the Israelites to pass through their territory on their way to the promised land indicates an organized government in these territories with a sedentary population living in cities. If the territory at that time had been occupied only by nomadic tribes, there would have been no one capable of saying "yes" or "no" to this request, and there would have been no more reason for lodging such a request than for passage through the Negeb. Since the evidence of sedentary occupation after the long gap of non-sedentary occupation began c. 1300 B.C., Glueck concluded that the Israelite passage must have occurred in Iron I.[48]

> It becomes impossible, therefore, in the light of all this new archaeological evidence, particularly when studied in connection with the deposits of historical memory contained in the Bible, to escape the conclusion that the particular Exodus of the Israelites through southern Transjordan could not have taken place before the 13th century B.C. It will be recalled that the Israelites begged the Edomites and Moabites in vain for permission to travel through these kingdoms on their way to the Promised Land. The Israelites were compelled to go around them and finally force their way westward to the Jordan on the north

> side of the Arnon, which at that time was part of the territory of Sihon, king of the Amorites. Had the Exodus through southern Transjordan taken place before the 13th century B.C., the Israelites would have found neither Edomite nor Moabite kingdoms, well organized and well fortified, whose rulers could have given or withheld permission to go through the territories.

If the reasoning of Glueck here is valid, this would leave the placement of the Exodus in the XVIIIth Dynasty indefensible. This, in turn, leaves the field open to the proponents of the XIXth Dynasty placement, in spite of the numerous objections that may be raised to this placement.

Glueck recognized a further correlation of archaeology with Scripture in the discovery of a considerable number of remnants of ancient copper smelting sites along the geological faults reaching from the south end of the Dead Sea to the Gulf of Aqabah.[49] Essentially all of the pottery found in conjunction with these sites is from Iron I. By current views, this is the era of the Israelite monarchy, and the smelting sites were attributed to Solomon, who is stated in Scripture to have used large amounts of copper in his construction program. Further observations at a site, believed to be that of Ezion-geber, appeared to confirm these conclusions. The problems relative to the site of Ezion-geber are considered in a subsequent section of this chapter.

VII. Some Large Objections to the Conclusions of Glueck

It would seem that there are a significant number of scholars who are not altogether pleased with the conclusions of Glueck. Part of this objection has risen from an expressed greater degree of confidence in Scripture than many scholars are willing to admit, though Glueck has placed himself on record as following the popular view that the stories of Scripture were not reduced to writing until a much later time and hence are of legendary origin. Glueck would attribute the accuracy of Scripture on so many details to an "amazing historical memory" on the part of later writers.[49a]

The conclusion of Glueck relative to the necessity of a sedentary occupation in the Negeb at the time of Abraham's journey from Palestine to Egypt does not provide a solution to the problem. If there was a famine at this time in Palestine, then the effects of any draught leading to a famine would be even more severely felt in the Negeb. If the water supplies in Palestine were limited to the point resulting in a critical water supply, then certainly any occupants of the Negeb, who had made possible only a border-line living, were not going to welcome Abraham with his large herds of cattle to share these meager and dwindling water supplies. They would be trying desperately, perhaps already in vain, to meet their own needs without taking on the problems of migrants with their herds. If this journey was not possible at a time of nonsedentary occupation, it was not possible otherwise.

The conclusion of Glueck is also based on a belief that there has been no change in climatic conditions from the time of Abraham; yet Scripture states specifically that the territory south of the Dead Sea was well-watered, a description that hardly holds at the present time.[50] If this migration had been made at a time when there was *no* sedentary occupation, then it is possible that Abraham had unchallenged access to the water sources, meager as they may have been. If one allows that the same God who called Abraham out of Mesopotamia into Palestine, and who promised this territory to his descendants, was able to lead Abraham to the water needed on this journey, there is no problem. If one denies this factor of divine leadership, then the problems throughout the story from Abraham to the settlement of Israel in Palestine are insurmountable. It is then not alone the story of Abraham's journey to Egypt that should be dismissed from scientific consideration; it is the entire content of early Scripture that requires such dismissal.

The attribution of the destructions in Transjordan at the end of Early Bronze to the conquest of the territory by Chedlorlaomer and his allies is out of the question. These destructions extend throughout the territory of Palestine as well and even throughout the territory to the north of Palestine. The details provided in Scripture do not allow for the inclusion of any such extended area of conquest.

In the opinion of the writer, the most serious error that has been made is that which concludes that there was no sedentary occupation in Transjordan throughout the eras of Middle and Late Bronze. This conclusion is based on the supposition that Early Bronze ended in Transjordan at the same time that it ended on the west of Jordan. There is no proof for this supposition. The definitions of the limits of the Archaeological Ages are based on major changes in culture. There are no facts that require a change in the occupants of Transjordan at the time of the major change in Palestine. Certainly the Israelites did not occupy the territories of Edom and Moab at any time during their history, and even the later Assyrian control of this territory did not result in an occupation by the Assyrians.

If the same people that conquered Palestine at the end of Early Bronze did not also occupy Edom and Moab, then there is no reason for supposing that Early Bronze ended in these territories at the end of Early Bronze in Palestine. A failure to recognize such a situation would lead to an interpretation of the archaeology of these areas as representing a gap in sedentary occupation — a gap that had no factual existence. Or, if there was an actual gap in sedentary occupation of *part* of Transjordan, it would *appear* logical from the archaeological evidence to assume that this was true of the entire area.

In a subsequent section,[51] it will be shown that when the Archaeological Ages are set in the background provided by the chronological revision, the proper interpretations of the archaeology of Transjordan come into clear focus. At the end of Early Bronze, as marked by the change in culture in Palestine, northern Transjordan *was* settled by a nonsedentary population, while no change in the identity of the occupants of Edom and Moab occurred then or at any time for many centuries afterward.

VIII. The Problems at Ezion-geber

In addition to the above objections to the conclusions of Glueck, still larger problems rise relative to the interpretations of the archaeological finds at Ezion-geber. There are a number of references in Scripture dealing with the territory of the Negeb. These include mention of three incidents at Ezion-geber and a fourth at Elath. The Israelites camped at Ezion-geber in their journeys to the promised land.[52] Judging from the sequence of camp sites, this was shortly before they turned east to skirt the territories of Edom and Moab. The major point of interest in these references, other than reference to camping at the site, is the reference to Elath as a near-by site, but one distinclty different from that of Ezion-geber.

Solomon constructed a navy of ships at Ezion-geber and harbored them off shore in the Red Sea.[53] This must have been the Gulf of Aqabah, which is the east arm of the Red Sea (See Fig. 3). A similar attempt was made by Jehoshaphat at this same site (872-848).[54] A further comment is provided to the effect that there was no king in Edom at this time, a deputy serving as king. This was evidently a continuance of the situation from the time of David, who had placed garrisons throughout the land of Edom,[55] a situation that prevailed till the rebellion under Joram, son of Ahab[56] (852-841). An occupation of this territory by the Syrians at the time of Ahaz (735-716 B.C.) is indicated by the "recovery" of Elath by Syria and the ejection of the Jews from the site.[56a]

The location of the site of Ezion-geber has long been a matter of uncertainty. Early investigators had looked for it some 30 kilometers inland from the present gulf coast on the basis of an extant legend. The legend is to the effect that the ancient city of Ezion-geber had been the victim of a violent catastrophe in which the city was buried with rocks and soil that had washed down the hills in a torrential storm.[56b] Such an inland location must presume that the Gulf of Aqabah extended this far north from its present shore line to allow the Scriptural statements that the site was located on the Red Sea. The depression occupied by this northern extension must then have been filled in with drifting sand during the course of the centuries.

Fritz Frank had suggested, however, that the low mound near the northern extremity of the *present* gulf of Aqabah concealed the remains of the ancient site of Ezion-geber. Rejecting the legend as a "fairy tale" and following the suggestion of Frank, excavations were conducted on this mound by an expedition sponsored by the American School of Oriental Research. As a result of these excavations, the investigators concurred with the suggestion of Frank that this site should be identified as that of the ancient site of Ezion-geber.[57]

The principal evidences for such an identification were given as: (1) The Scriptural statements indicating a position of the site on the shores of the Red Sea at the time of Solomon and of Jehoshaphat, (2) the absence of evidence that the shore line had changed at any time since the 6th century B.C. or of any climatic change or change of water level at any time back to the 15th century, (3) the finding of copper mines, in the area just to the north of the site, which were equated with Scriptural references to the use of large amounts of copper by Solomon, (4) the finding of pottery fragments at the site like those found also at the copper mines, (5) the discovery of a large structure at the site which from its design was believed to have been used as a smelting plant for the mined copper, and (6) the discovery in the oldest city on the site of a three doored gate like one found at Carchemish in Hittite territory, like one found at Megiddo and believed to have had a Solomonic origin, and like the gate found at Lachish also assigned a Solomonic origin.[58]

However, there were also anomalous finds to be considered. The oldest city at the site was found to be no older than the time of Solomon (by the popular chronology) and hence the site could not have been that at which the Israelites camped.[59] There was no evidence of any near-by city that could be identified with the Biblical Elath.[60] The shore at this point is not at all favorable for the harboring of ships, and there was no evidence that any docks had ever been constructed there,[61] thus raising a question as to how either Solomon or Jehoshaphat could have harbored a navy at this point under present conditions.

These observations were evidently not considered as standing against the identification of the site as Ezion-geber. The legend of an earlier protrusion of the gulf was disposed of by assuming it to have no more validity than a fairy tale.[62] The failure to find the associated site of Elath was taken care of by assuming that the oldest city on the site was the Ezion-geber of the time of Solomon, while one of the later cities at the same site took the name of Elath.[63] The absence of any evidences of occupation prior to the time of Solomon were bypassed by assuming that the Scriptural account means only that the Israelites stopped at a place which later became the site of Ezion-geber.[64] The unfavorable, if not impossible, usability of the coast at this point as a harbor for boats was avoided by assuming that the boats were but small dhows, which were anchored off shore.[65]

The initial surprise from the location of the site in such an unfavorable place, from the standpoint of the severe wind and sand storms that frequent the area, was dispensed with on a closer examination of the large structure within the city which was regarded as a large smelting plant.[66] The structure revealed two rows of carefully constructed apertures in the walls which "could only be flues." Since temperatures requiring some provision of an air blast would be needed to yield the conditions for smelting copper from chrysocolla ores, it was presumed that these flues were designed to make use of the violent winds as a means of providing the air blast necessary to obtain the needed high temperatures. Thus what had at first seemed to be a rather stupidly selected site for the town now became the product of the great wisdom of Solomon.[67]

On more critical examination, these proofs for dating the earliest city on this site as that from the time of Solomon have one by one lost their validity. Later re-examination of these "flues" indicated in unmistakable fashion that they were not flues and had never been thus used.[68] They were the holes left from the ceiling beams when the structure had later been destroyed. It is to the credit of Glueck that he had the courage to admit the earlier mistake in identification. However, one sees in his later report a large tendency to cling to certain corollaries of the early interpretations that depended heavily on this earlier but erroneous identification.

It is not feasible to dismiss the difficulty resulting from the now impossible use of the shore line for harboring boats by assuming that these were small craft that could be anchored off shore. Scripture stated that the boats were used to sail to Ophir for gold and that expert seamen were needed to sail the ships.[69] While the location of Ophir is not known with certainty, it could not have been very close to the site of Ezion-geber, since there are no gold fields in this area. Locations as far as India and East or South Africa have been suggested. In any case, the corresponding ships constructed by Jehoshaphat were built to make the voyage to Tarshish,[70] a site that was very probably located on the coast of what is now Spain. Such voyages were not made in small boats.

The difficulty rising from the absence of any city on the site earlier than that attributed to Solomon, but which should be dated much later, remains as an anachronism with the Biblical statement that the Israelites camped at this site at the time of their entrance into Palestine. So also the anachronism with Scripture remains relative to the statement that Elath was not the same site as Ezion-geber, but was a near-by site. The pottery at the site may well tie the date of the site to the neighboring mines to the north, but this provides no basis at all for dating the site to the time of Solomon. Evidently Glueck himself was not totally convinced of the identification of the site following the re-investigations.[71]

> . . . *If* Tell el-Kheleifeh is not in all finality to be identified with Ezion-geber:Elath, then it must be considered a fortified industrial maritime storage and caravanserai center for both.

Data obtained from the three subsequent cities constructed in turn on the site of the oldest city may provide valuable clues. City IV, the most recent, is clearly from the 4th or 3rd century. In City III were found fragments of jars inscribed in Minaean script. The Minaeans belong to the period from the 6th to the 4th centuries. With the collapse of the evidence of a Solomonic origin for City I, this city should be assigned to an Assyrian origin in the 8th or 7th century. It is, of course, complimentary to Solomon, but the assumption that he was the only man in the course of half a millennium who was capable of the accomplishments attributed to him is not an obvious deduction.

While the concept may be unpopular among investigators, the writer would seem to have a greater confidence than some in the Ezion-geber legend and would propose that the search for the site of an earlier Ezion-geber be reinstigated in the area suggested by the legend. The violent winds in the area may be considered as an adequate factor for the filling in of the depression of the gulf with sand back as far as the original site. The same explanation may hold for the problem of the location of the site of the crossing of the Red Sea by the Israelites. There is no necessity for supposing that there has been any significant change in the climate of this area back to 600 B.C., or that there has been any significant change in the water level, for this legend to have a factual basis.[72]

IX. An Alternate Interpretation of the Archaeology of Transjordan and the Negeb

By the revised chronology, the end of the Early Bronze Age in Palestine is marked by the incidents of the Exodus and the Conquest. The destructions of cities in Palestine at the time of these incidents, only forty years apart, may not be distinguishable in all cases. The continuation of the evidences of destruction to the north of Palestine may be accounted for by the natural catastrophe at the time of the Exodus[73] or possibly in part by the peoples migrating out of Palestine at the time of the Conquest. This destruction of cities is evident also in northern Transjordan and represents the destruction of these cities by the Israelites.[74] Any destruction of cities in this area at the time of the conquest by Chedorlaomer and his allies belong to an era centuries earlier than this in Early Bronze. The necessary assumption that this conquest included extensive territory of Palestine west of Jordan is provided no support by the Scriptural details. It could be expected that these cities were much smaller then than at the time of Joshua, and the materials may have been reused in reconstruction to make this evidence obscure.

Middle Bronze I, by the altered interpretation, represents the culture of the Israelites after the Conquest, when they had opportunity to settle down in their new inheritance and utilize their inherent abilities.[75] At this time, the area of the Negeb was also occupied by certain tribes who preferred this type of life and who were then responsible for solving the problem of water supply at least to the point of meeting their needs as a seminomadic people.[76] The culture at this time is the same as that for the territory to the north for the same period,[77] indicating that this occupation was an expansion of Israelite occupation.

The territories of Edom and Moab were not occupied by the Israelites at the time of the Conquest, and no change in culture is to be expected. Since the Archaeological Ages have been defined in terms of major cultural changes, it follows that Early Bronze in Edom and Moab continued without interruption at least to the time of David and possibly even later. The apparent gap in the sedentary occupation of this territory has thus resulted from a failure to recognize this difference in the history of the area from that of Palestine in the correlation of periods between the two areas.

In recognizing a sedentary occupation in Edom and Moab in Iron I, Iron I is given a beginning about a century earlier than is given for Iron I in the territory west of Jordan. In Transjordan, the assigned date is c. 1300 B.C.;[78] in Palestine the date is c. 1200 B.C. or later.[79] By the revised chronology, the dates are in the 9th and 8th centuries respectively. What is regarded as a resumption of sedentary life in Edom and Moab thus belongs to about the time of the rebellion of these territories against Israel in the mid-9th century.[80] The period just prior to this, suggesting a nonsedentary occupation, may be accounted for on the basis of the notable diminution of occupants resulting from the destruction of a large part of the population in the wars of David.[81] In one case, this involved all of the male population; in another, two-thirds of the population. Since these incidents left primarily or totally a female population, there would be little or no evidence of political organization.

The territory of northern Transjordan *was* occupied following the Conquest, but the occupation was by the two and one-half tribes who chose this territory because it fitted into their occupation as herdsmen. Their mode of life was thus largely nonsedentary. While it is stated that the people occupied some of the rebuilt cities, there are too many unknown factors to attempt to define what meager cultural evidences could be expected to be revealed archaeologically. The writer suspects that there might well be some meager evidences of a semi-sedentary occupation of some of these sites. However, there is a real danger in interpreting the significance of such meager evidence as occupation when it may represent only "trade" or a temporary residence of a few people from another territory. Probably most of the cultural evidences of the Israelite tribes in this area are scattered over the wide expanse of the territory as local camp sites. The infrequency of mound sites in Transjordan with the near-complete absence of stratified deposits can be expected to make it very difficult to make unequivocal chronological assignments.[82]

Notes and References

(1) See accompanying map. (2) Num. 20:14ff. (2a) An alternate route has been suggested which would recognize that the Israelites skirted Edom on the *west*, continuing north along the eastern side of the Dead Sea to a point just south of the northern border of Moab, then moved eastward to the desert fringes before the eventual thrust westward through the territory of the Amorite kings. While suggested many years ago, this concept seems not to have won any general acceptance. (3) Ex. 15:15. (4) Num. 22:36, 39; 23:28; 21:20. (5) I Sam. 14:47. (6) II Sam. 8:12, 14. (7) I Kings 22:47, 48. (8) II Kings 8:20. (9) Jer. 49:17. (10) Eze. 25:12-14. (11) II Kings 16:6. (12) Gen. 19:36, 37. (13) Num. 21:11; see also note of ref. 2a (14) See ref. 4. (15) Num. 21:13, 26. (16) Jdg. 3:15, 28-30. (17) Ruth 1:1-4. (18) Ruth 4:17, 21, 22. (19) See ref. 5. (20) II Sam. 8:2. (21) II Kings 1:1. (22) See ref. 12. (23) Jdg. 11:4ff.; II Sam. 10:11; 12:29-31. (24) Eze. 16:3. (25) II Sam. 21:2. (26) Gen. 15:16. (27) Num. 21:26. (28) Deut. 3:3, 4. (29) Num. 13:29; I Sam. 30:1. (30) Num. 21:1; 33:40. (31) I Sam. 27:10. (32) *Ibid.* (33) I Sam. 30:14. (34) *Ibid.* (35) *Ibid.* (36) Num. 34:3, 4; Deut. 1:7. (37) Gen. 12:9; 13:1, 2. (38) Gen. 13:1, 3. (39) G-RD, p. 67. (40) See refs. 31-34. (41) See quot. of ref. 47. (42) G-RD, Chap. VI. (43) G-OSJ, pp. 21, 149. (44) *Ibid.*, p. 20. (45) G-OSJ, p. 145. (46) *Ibid.*, p. 114; G-RD. pp. 71-73. (47) G-RD, p. 68. (48) G-OSJ, p. 146. (49) *Ibid.*, Chap. III. (49a) G-RD, p. xi; see also p. 71; G-OSJ, p. 114. (50) Gen. 13:10; see SDABD, article "Zoar" for probable location of this site. (51) Sect. IX. (52) Num. 33:35, 36; Deut. 2:8. (53) I Kings 9:26. (54) I Kings 22:48. (55) II Sam. 8:14. (56) II Kings 8:20, 21. (56a) See ref. 11. (56b) G-OSJ, p. 90. (57) *Ibid.*, pp. 91, 92. (58) *Ibid.*, pp. 101, 103. (59) Num. 33:35; G-OSJ, pp. 94, 99, 104. The lowest city at this site was dated from the era of Solomon. (60) I Kings 9:26; G-OSJ, p. 113. (61) C-HP, p. 307. The legend of Ezion-geber included reference to many ships being harbored there when the site was located farther inland (G-OSJ, p. 90). (62) *Ibid.* (63) *Ibid.*, p. 113. (64) *Ibid.*, p. 104. (65) See ref. 61. (66) G-OSJ, pp. 92, 94. (67) *Ibid.*, p. 99. (68) BA, Vol. XXVIII, p. 73. (69) I Kings 9:26, 27. (70) See ref. 54. (71) See ref. 68, p. 71. (72) Glueck has used such evidence to support his interpretations of the archaeology of Transjordan and the Negeb (BASOR, No. 109, p. 15; G-RD, pp. x, 7, 16, etc.). However, the chronological revision makes the date to which he refers susceptible to an entirely different interpretation. This results from the popular dates having been set centuries too early. What he is calling 1500 B.C. is actually only 900 B.C., and his deduction relative to climate and water level of the Red Sea may well be true for 900 B.C., but not necessarily true of the era of the Exodus. See Chap. VII for clear-cut evidences of gross climatic changes, the effects of which may well have continued to this later era to some degree. (73) See Chap. VI, Sects. VII, VIII. (74) Deut. 3:1-6. (75) Vol. I, Chap. VI, Sect. VIII. (76) See ref. 4. (77) G-RD, p. 69. (78) G-OSJ, p. 125. (79) A-AP, p. 112. (80) II Kings 8:20f. (81) I Kings 11:14-16; II Sam. 8:2. (82) G-OSJ, p. 21.

CHAPTER XVI

PROBLEMS IN THE CHRONOLOGY OF ANCIENT GREECE

Admittedly, the chronology of Greece for the critical era under consideration in this treatise has not been established as solidly as has the corresponding chronology of Assyria. However, a chronology back as far as the mid-8th century has been established with close approximation and with relative certainty. With this as a basis, it is possible to clarify a number of critical points in the earlier chronology to the point of revealing the nature of the errors that have been made in the development of the traditional structure.

I. The Discovery of Legendary Troy and Its Effect on Popular Opinion

Prior to the archaeological excavations at Troy (1870-1890), scholars generally regarded the ancient Greek writings as pure myth without historical significance.[1] Until late in the 19th century, many serious orthodox classical scholars, especially in Germany and on the Continent, believed that the Homeric poems dealing with the incidents related to the fall of Troy were altogether products of poetic imagination with no basis in realtity. On the basis of this premise, it was considered "useless and foolish" to look for an actual physical site of Troy. A basis for such a conclusion was at hand from the productions of Homer and of later Greek writers. The actions of men were mingled with those of the gods, and in many other ways the stories reflected a legendary or mythical origin. On the other hand, there were many detailed references to the city of Troy which suggested that Homer was writing about a real location and about real events. Even among the few who entertained the possibility that there might be much in the writings of Homer that represented actual events and places, there was no agreement on such a major item as the location of this site.

It was not until the excavations by Schliemann at the mound now known as Hissarlik that there was a change in the thinking among scholars relative to the historical value of Homer's writings.[2] In 1868, Schliemann had identified the mound of Balli Dagh as the site of Troy, but after some brief observations, he concluded that the site did not satisfactorily meet the specifications given by Homer. The first digging at Hissarlik was by Frank Calvert, who owned part of the hill that composed the mound. After brief digging, he was convinced of the identity of the site as that of ancient Troy and convinced Schliemann of his conclusion. As a result, Schliemann decided to excavate the mound on a large scale. The farther the excavations were carried, the more obvious was the correctness of this deduction. In fact, the evidences were so convincing that Schliemann was able to convince scholars, many against their will, that the mound of Hissarlik was indeed the extant remains of the ancient site of Homer's Troy.

However, it also became apparent that the site of Troy at the time of Homer, and even more so the Troy of which he wrote, was considerably less pretentious than suggested by his descriptions. Confirmation of a number of details provided by Homer were observed archaeologically, but the exaggerations also became more and more obvious.[3] From these observations was born the concept that many generations had passed between Homer and the Troy of which he wrote, and that his information had been passed on orally for an extended period of time prior to reduction to writing. Hence the introduction of the concept of "tradition" to express the presumed evolution of historical facts to form the legendary and mythical accounts of the later Greek writers. According to this thesis, that which may have had a genuine historical basis became a garbled mixture of fact and unbridled imagination.

The details of Schliemann's investigations have been described by other writers[4] and need not be repeated here. The same may be said of the details in Homer's works, which have permitted a rather unequivocal identification of the site of Troy, and of the various evidences of exaggeration or of specifications not corroborated by archaeology. Interest here is rather in the shift in thinking on the part of scholars resulting from these investigations. Most scholars now seem willing to admit that even passages from the legends which on first reading might be regarded as purely mythical, may have had some "kernel of historical truth" in them. The extent of this reversal of thought can best be appreciated by persuing some of the subsequent attempts to find such a historical basis for the myths.

There still remains a difference of opinion, however, relative to how far one can rationally go in attempts to find historical interpretations to the legends. It suffices here to note that most scholars at the present time are probably willing to admit that, in the main, the characters mentioned in the Greek myths had a real existence, though some might hesitate in expressing an unqualified belief that such characters as Heracles or Lycurgus were other than fictitious. One may explain the inferences that some of these characters were born of the gods by assuming that this was but a less offensive way of stating that they were of illegitimate birth or that their parentage was unknown. So also the references to conversion of certain humans to animals may well have been but a deliberately ambiguous way of indicating that there was no use looking further for these among the living human race, possibly because they were victims of an unpublicized murder.

It is the present writer's conviction that while these myths clearly present backgrounds of fanciful details, the characters not only had a real existence, but also the time and genealogical relations as given are factual. Thus while it may not be possible to set up a chronology of this era on the basis of such source materials, an approximate floating chronology can be devised which requires no improbable time relations or life spans. Examples of lineages of certain of these characters are provided as Tables V-VIII in this chapter.

II. The Current Dating of the Legendary Age of Greece

While some scholars might be reticent to admit any serious chronological value for these numerous statements of contemporaneity and genealogical relationships, the era includes reference also to certain incidents that are now universally recognized as of historical occurrence. Among these is the Trojan war, which culminated in the fall of Troy. Homer's Iliad has its background in a late phase of this war.[5] Recognized also is the incident of the invasion of southern Greece by a northern people known as the Dorians.

The incident of the Trojan war is mentioned in both Greek and Egyptian writings to provide a synchronism between the two chronologies. In the Egyptian references, the Trojan war is given a background in the XIXth Dynasty. Africanus and Eusebius have identical appended notes following the name Thuoris of this dynasty to the effect that the fall of Troy occurred during the rule of this king.[6]

> Thuoris, who in Homer is called Polybus, husband of Alcandra, and in whose time Troy was taken, reigned for 7 years.

While these notes may have been added by the transcribers of Manetho, the fact that the notes are identical in both transcriptions suggests that they formed part of Manetho's original document. The Sothis king list has a note appended to this same name stating that after the close of the war, Menelaus and his restored wife, Helen, visited Egypt during the rule of this same Thuoris.[7]

With Egyptian chronology regarded as "fixed" within about a decade for this dynasty, a date c. 1180 B.C. has been assigned to the fall of Troy. However, some scholars have preferred a date as early as 1209 B.C.[8]

III. This Dating Must Recognize a 300-Year Hiatus in Greek History

Greek chronology is not solidly fixed until one reaches the era of the mid-6th century B.C. However, from this point, the chronology can be traced back in time by means of the Spartan and Macedonian kings (Tables V and VIII) to a date that cannot be far removed from the mid-8th century. According to the later writer, Thucydides, the Dorian invasion occurred 80 years after the fall of Troy.[9] At this point, Greek history becomes a blank. For the period between this invasion and the Spartan kings, whose lines can be traced back to c. 750 B.C., there are no written sources, legendary or otherwise, to provide reference to any event, or any king, or any person, who lived during this hiatus of some three centuries. It is as if the entire population of Greece began a Rip van Winkle-type sleep, only to wake up 300 years later but, still having a common knowledge of incidents that occurred before the long sleep. Yet the two sides of the hiatus are characterized by different customs, and different outlines of territories occupied by the peoples, and by other differences in various phases of Greek living.

Since the earliest kings of the Spartan lines belong to the era of the Dorian invasion, prior to the hiatus, while others can be traced back to the point marking the end of the hiatus, it is necessary to assume that this 300-year break encompassed the reigns of unknown Spartan kings during this 300-year priod or that the line was broken and reinstated at the end of this period.[10] The cause of the break must then be recognized as the Dorian invasion or incidents related to the Dorian invasion.

Modern discussions on the chronology of Greece are replete with references to this unexplainable gap. Quotations of several such containing comments of additional interest are here reproduced.[11]

> . . . The Dorian tribe called the Hylleis claimed that their name was derived from Hyllus, the son of Heracles. The Dorian invasion marks the end of the Mycenaean civilization and begins the so-called Dark Ages of Greece, a period of some 300 years during which extensive changes occurred in many aspects of Greek life.
>
> Between the Greece of such legends as those which we have been considering and the Greece of the earliest historic period there has always been a great gulf of darkness. . . . And in the interval no one could say how many generations, concerning which, and their conditions and developments, there was nothing but blank ignorance.
>
> The ending of the Mycenaen civilization, at the close of the Bronze Age, came in an age of general unrest, migrations and invasions. The relative stability of the Late Bronze Age was shattered, and a chaotic period began for which we have no reliable dates or facts to go on. Whereas the history of the Ancient East proceeds without a break [*sic*] after a relatively brief spell of violent destruction, the phase of Greek history extending from about 1200-1150 to 750 B.C. is, as observed in the previous chapter, one of the most obscure in all ancient history. There is no means of reducing this long hiatus. . . . With the Mycenaean civilization we were almost on the threshold of historical times, yet now we are plunged into a protohistoric epoch which seems almost a complete blank. To describe it as the "Homeric period" is absurd; Homer's world corresponds either to the Mycenaen or to the Archaic period, surely not to the interval between them. To describe it as the Geometric period is more correct, but tantamount to confessing that our knowledge of it remains purely archaeological.
>
> In dealing with the concluding phase of the Dark Age, we must remember that the chronology of the Archaic period still rests entirely on the dates given by Thucydides for the founding of the Greek colonies in Sicily and also on a few sporadic dates, sometimes belatedly attested, assigned by tradition to the founding of other colonies in Italy and on the Black Sea. There has been much discussion of these tradi-

tional dates and they have been queried, but in the end we are bound to fall back on them for there is nothing else to go on. It is because Thucydides dates the founding of Syracuse to 735-734 B.C. that the transitional phase between Geometric and Orientalizing art, the so-called Subgeometric found on the earliest levels at Syracuse, is assigned to the second half of the 8th century. It is because Selinus, founded in 625 B.C. according to Thucydides, has yielded no Proto-Corinthian and only Corinthian ware, that the transition from one to the other is held to have taken place previously to 625.

IV. The Assumed 300-Year Gap in Greek History Is Nonexistent

The necessity for assuming such an improbable gap in Greek history should have served as an adequate basis for suspecting that there was something grossly and radically wrong with a chronology of the ancient world that had demanded recognition of any such blank. The accumulating evidence for a similar gap in the histories and occupation of so many other areas for approximately the same period should have been recognized as an adequate basis for initiating a critical scrutiny of the validity of the premises that had led to such a structure.[12] At the present time, there are numerous lines of evidence indicating that there never was any such gap in Greek history, and that the legendary period should be moved forward to fill all but a mere fraction of this hiatus. The picture that emerges is one that recognizes the Dorian invasion (and events related to that time)[13] as the immediate cause of the severe changes to be observed in the many phases of Greek life for the period following this invasion. The more significant of these evidences will now be reviewed.

V. The Improbability of Any Such Historical Gap

First in the list of such evidences, we note the exceedingly remote possibility for the existence of any such blank in Greek history. History is a record of incidents, and incidents require people as participants. One might conceive of a gap in a chronology following a disaster of such magnitude as to wipe out the entire population, but even then history teaches us that other peoples would certainly move into the area short of 300 years.

The disaster to this area at the time of Deucalion's flood was evidently on a much greater scale than was the Dorian invasion. Yet legends are extant for the immediately following period. Names of persons are noted in the legends that can hardly belong more than a single generation after the catastrophe. How then are we to logically account for the absence of even a legendary recollection of incidents and names over a period of 300 years, yet belonging to an era much closer to the later writers?

It is inconceivable that a line of Spartan rulers continued to rule throughout this interval with no knowledge of such rule on the part of later writers. It is equally inconceivable that the line could have been broken so near its beginning and then reinstated 300 years later. This hypothetical gap has its origin in the unwarranted expansion of Egyptian chronology. When this error is corrected, to meet the altered structure described in this work, there is no need for such an improbable hypothesis.

VI. The Genealogy of Alexander the Great

On one occasion, it was demanded of Alexander the Great that he be able to trace his ancestry back to the pre-Trojan war heroes.[14] This he was able to do to the complete satisfaction of those making the demand. As far as we know, there is no extant record of the genealogy used by Alexander at that time (336-323 B.C.). However, the very fact that he was able to do so indicates clearly that in his day the names of persons were known which spanned the entire period back to Heracles. If such was true of the ancestry of Alexander, it must have been true of others also.[14a]

VII. Evidences that the Fall of Troy Belongs to the 8th Century, Not to the 12th

Philo-Byblius, according to Stephen, considered Semiramis contemporary to or slightly prior to the Trojan war.[15] The Semiramis of history was the mother and coregent of Adad Nirari of Assyria (805-752 B.C.).[16] Since the coregency was at the beginning of the reign and slightly before the fall of Troy, this evidence dates the incident in the early 8th century and not in the 12th, as is currently done. The anachronism that results from this early date has been explained on the assumption that this Semiramis was a god or a mythical character of an earlier date and is not the mother of Adad Narari III. The writer finds it exceedingly difficult to seriously entertain such an explanation. Why should an ancient writer synchronize an incident like the fall of Troy with a god or a mythical person that had no specific life span?

The ancient writer, Virgil, makes Aeneas of the Trojan war era a contemporary of Dido, the sister of Pygmalion, a Phoenician king of the mid-9th century. This date is a full three centuries later than the date attributed to the fall of Troy traditionally. The anachronism has been explained by presuming that Virgil is taking characters from widely different eras and placing them in the same story as an example of poetic licence.[17]

> Virgil has made a great alteration in this history, by supposing that Aeneas, his hero, was contemporary with Dido, though there was an interval of near three centuries between the one and the other; the era of building of Carthage being fixed three hundred years later than the the destruction of Troy. This liberty is very excusable in a poet, who is not tied to the scrupulous accuracy of a historian.

One can only comment that by the unbridled use of such reasoning as a means of bypassing anachronisms, one could find "scientific" support for essentially any chronology that he might choose to devise.

Philistus placed the fall of Troy 37 years *after* the founding of Carthage.[18] Justin and Orosius agree in placing the founding of Carthage 72 years before the founding of Rome.[19] The date for the founding of Rome is now set at 753 B.C.,[20] thus yielding a date 825 B.C. for the founding of Carthage by the statements of Justin and Orosius. The fall of Troy then occurred in 788 by the statement of Philistus. This date is in excellent agreement with the less definite statement of Philo-Byblius, who placed the event shortly after 800 B.C. This date, 788 B.C., falls very close to that deduced for this incident by totally independent means.[20a]

VIII. The Anachronism of the Time Relation Between the Dorian Invasion and the Migration of the Sea Peoples

A severe anachronism rises from the traditional views of the chronology of Greece relative to the time relation between the Dorian invasion and the migrations of the Sea Peoples. The Sea Peoples made an attempt to invade Egypt in the reign of Rameses III (currently dated c. 1200 B.C.).[21] Some scholars believe that this was a second attempt, the first having occurred in the 5th year of the reign of Merneptah, some 15-20 years earlier.[22] In any case, it is now apparent that this invasion was but a late episode in the migrations set in motion by the Dorian invasion.

In his recent classical volume entitled *The Birth of Greek Art*, Demargne found it impossible to develop the topic of Greek art apart from Greek chronology. Yet in attempting to correlate these developments with Greek chronology, he ran into the problem of the time relations involved between the incidents mentioned above. It was obvious to him that the migrations of the Sea Peoples were set off by the invasion of southern Greece by the Dorians, forcing the former occupants, (joined by occupants of the islands) to migrate to new quarters. The migrating hordes moved through southern Asia Minor, overran the Hittite territory of Anatolia, then moved southward along the Mediterranean coast. The attempted invasion of Egypt was then but a culminating episode in the course of this migration.

In recognition of the order of events, Demargne wrote:[23]

> It was undoubtedly the Dorian invasion of mainland Greece that forced the pre-Hellenes to take to the sea. Thus we come up against the Dorian problem, and here Greek tradition is our only source of information. This historical tradition of the Dorian invasion is mingled with the legend of the Return of the Herakleidae.

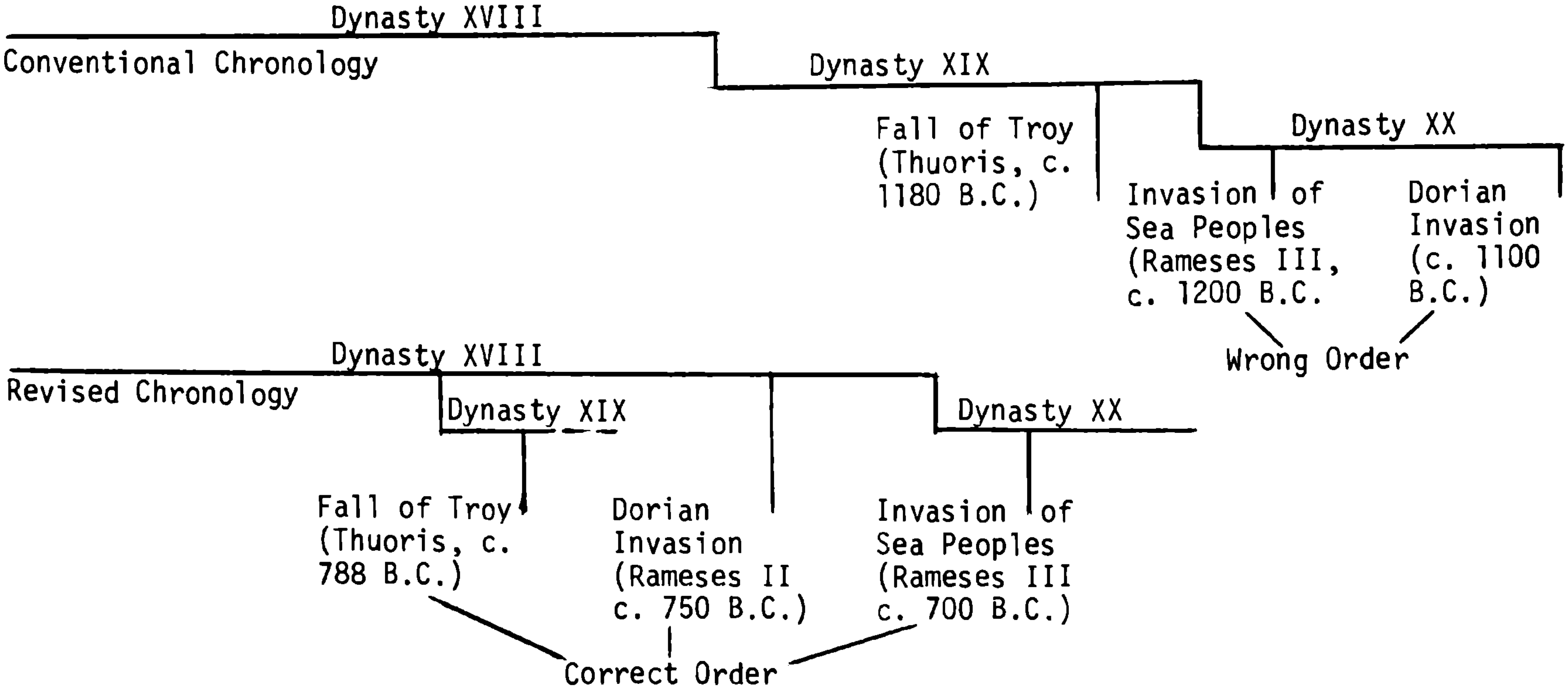
Cook recognizes this same cause and effect sequence,[24] as have also other scholars. The problem then is one of explaining how a cause could follow a result by nearly a full century.

Demargne does not provide a clear solution to this anomaly. Eventually, he was obliged to resort to the assumption that Homer as a poet, was not bound to a strict chronology and took advantage of his freedom to relate the incidents in time in any manner he chose.[25]

> Here a preliminary question arises: have the Homeric poems an historical value and, if so, what age or period do they purport to represent? Homer of course is not an historian but an epic poet who takes what liberties he pleases with chronology and geography, the proportions he gives to an event, the way he accounts for an action do not necessarily correspond to reality.

Yet the order of these incidents is deeply rooted in the writings of the later Greek historians. A more fundamental question calls for an answer: Is the repeated resort to such

Figure 4. Showing the Shift in Order of Incidents by the Revised Chronology (Fall of Troy-Dorian Invasion-Invasion of Sea Peoples)


Dynasty XVIII
Conventional Chronology
Dynasty XIX
Fall of Troy (Thuoris, c. 1180 B.C.)
Dynasty XX
Invasion of Sea Peoples (Rameses III, c. 1200 B.C.
Dorian Invasion (c. 1100 B.C.)
Wrong Order
Dynasty XVIII
Revised Chronology
Dynasty XIX
Dynasty XX
Fall of Troy (Thuoris, c. 788 B.C.)
Dorian Invasion (Rameses II c. 750 B.C.)
Invasion of Sea Peoples (Rameses III c. 700 B.C.)
Correct Order

explanations really necessary, or are these situations but additional anachronisms to be added to an already long list which results from a recognition as "fixed" of a grossly erroneous chronology of Egypt?

The answer is neither obscure nor evasive. When these problems are set against the background provided by the proposed revision, these problems, along with the many previously introduced, find simple and credible solutions.

To be sure, the rejection of the 300-year gap in Greek history does not provide a complete answer. The critical incidents remain in the wrong order. But fundamental to the proposed revision is also the recognition that a mistake has been made in the modern revision of the content and position of Manetho's XIXth Dynasty.[26] When it is recognized that Dynasty XIX did not follow Dynasty XVIII but was an off-shoot from it at the time of Seti I, and when it is recognized that the synchronisms between Egypt and Greece belong to the era of this position of Dynasty XIX, then the order of these incidents is reversed. It is this same restoration that provides the date for the fall of Troy c. 790 B.C., which agrees with the calculations based on other statements from the ancient Greek writings. The difference between the two views is indicated by the chart of Figure 4.

IX. Dating Homer

The dating of Homer in Greek chronology has been a problem of longstanding. Even the ancients were not agreed on his placement, the dates varying over a period of 400 years. Crates and Eratosthenes thought he must belong to a period not later than a century after the Trojan war.[27] Aristotle and Aristarchus placed him contemporary with the Ionian invasion (shortly following the Dorian invasion); Appolodorus dated him 240 years after the Trojan war; Porphurius 275 years after, the Parian marble 277 years after and Herodotus 400 years after. Theopompus made him contemporary with the Lydian king Gyges (716-678). Hellanicus places him in the 12th century, based on the high improbability that he could write so vividly of the sites and incidents related to the era of the Trojan war. Yet if one elects such an early date to meet this enigma, he is only faced with another that is equally incredible. It is inconceivable that Homer could have conceived in his mind and executed such extensive works without the assistance of writing; yet writing appeared in Greece only in the late 9th century.[28] Kitto considered the figure of Herodotus as most nearly correct.[29]

Homer refers to the "coming of Tlepolemus" a descendant of Heracles to the Island of Rhodes, suggesting that his time is after the return of the Heraclidae.[30] However, the statement has been regarded as an insertion by a later writer. Apparently, there is no convincing statement in the writings of Homer to provide a solid clue to this position in Greek chronology. He writes vividly of sites and incidents related to the era of the Trojan war, but many of the indications of background belong to a much later period.

It is not the purpose here to discuss at length the many intricacies which have left the dating of Homer an unsolved problem. It is rather to note that by the altered chronological structure defended in this work, this problem also has a simple and credible solution. The 300-year gap is nonexistent, except for perhaps a brief period during the recuperation from the catastrophe to Greece at the time of the Dorian invasion. At this time, most of the cities of Greece were destroyed,[31] and it has been generally assumed that this was the work of the invading Dorians. In a previous chapter,[32] it has been shown that a far more probable cause was a severe earthquake that brought ruin to wide areas even outside of Greece. The only remaining question is whether the Dorians took advantage of the catastrophe of the earthquake to invade the Peloponnesus, or whether this occurred after the invasion. In any case, this explains the evident gross changes that appear with the recuperation from the disaster without presuming this long hiatus in Greek history.

The era of the return of the Heraeclidae followed shortly the fall of the site of Troy. This resulted in the establishment of the dual line of kings at Sparta, who then represent a continuous line down to the time of Ariston (560-510 B.C.) and to Anaxandrides, his contemporary. There is no call for the necessary but highly improbable assumption that this line was broken for a period of 300 years with no names to fill the gap, only to be restored 300 years later.[32a]

By this structure, Homer could have belonged to the actual period of the Trojan war, though it is not improbable that he obtained his information from others who were altogether familiar with the details of that era and who were still alive when he wrote. Homer belongs to an era when writing was in current use, having been introduced half a century or more before his day. Many of the *relative* dates assigned to Homer by the ancients thus do not represent significant errors or discrepancies other than this same error of placing the fall of Troy back too far in time. This could well be explained on the basis of the great disaster that befell Greece at the time of the Dorian invasion, which left these relationships vague in the minds of later writers. We would then date Homer in the era following the Dorian invasion and, without attempting to be more exact, give him a position early in the second half of the 8th century B.C.

The principal data to be considered by this dating of Homer is the problem of the archaeological evidence. Demargne places him in the so-called Geometric period,[32b] a term used to define a new type of pottery which appears primarily in Crete and in Asia Minor, but of which samples are also found at several sites in Greece. The questions to be answered in this connection are: How long did this period of use of geometric pottery last, and does it necessarily represent an era independent of the use of Mykenaean or Archaic art? In answer to these questions, we can only rest the case on the comments of others. From the review of Demargne on this point,[33] we can only conclude that the available evidence does not provide clear answers. However, certain scholars *have* entertained the concept that the Geometric Period was *not* a period outside the limits of the Mykenaean and Archaic period.[34]

The style precedes what has been called Orientalizing styles and shows some evidence of having been of Dorian origin.[35] There are many regional styles, the most prominent having been found in Crete and in Asia Minor. Data obtained from excavations gave rise to much by way of debate and disagreement. Dorpfeld was the princiapl advocate of the view that the Geometric styles were *not* an intermediate between Mykenaean and Archaic styles. The styles show evidence of an influence outside of Greece; some have seen what is regarded as a renaissance from the Mykenaean period, but influenced by the art of Phoenicia. From such evaluations, the writer would predict that if further obser-

TABLE V

Lineage of Heracles and the Spartan Lines of Kings

Heracles	Father of Hyllus
Hyllus	Father of Cleodemus
Cleodemus	Father of Aristomachus
Aristomachus	Father of Aristodemus & Temenus of the Dorian invasion

Aristodemus

Procles, son of Aristodemus and founder of the line of the Europontidae	Eurysthenes, son of Aristodemus and founder of the Agid line
Sous, colleague of Agis	Agis, son of Eurysthenes
Eurypon, son or grandson of **Procles**	———
———	———
Eunomus, father of Polydectes	Agesilaus, son of Doryssus
Polydectes, son of Eunomus	Archelaus, son of Agesilaus
Charilaus, son of Polydectes	
Nicander, son of Charilaus	Teleclus, son of Archelaus
Theopompus, son of Nicander	Alcamenes, son of Teleclus
Zeuxidamus, grandson of Theopompus	Eurycrates, I
Anaxidamus, son of Zeuxidamus	Anasander, son of Eurycrates
Archidamus, son of Anaxidamus	Eurycrates II, grandson of Eurycrates I
Agesicles	Leon, son of Eurycrates II
Ariston, son of Agesicles and contemporary of	Anaxandrides, grandson of Eurocrates II

These genealogies may be traced through the articles under the various names as provided in the Dictionary by Smith (S-DGRBM of reference abbreviation list). While a few of the interrelations are missing, these can be set in by common synchronisms. The writer places no confidence in the figures assigned these kings by the ancients as representing elapsed time or accuracy. Procles and Eurysthenes clearly belong to the era after the Dorian invasion, begun under Aristomachus. The names below the blanks belong to the era of recovery. Hence the assumed 300-year gap must be placed at the break represented by the blanks. This may represent a brief period of recovery with a duration not more than a decade or two, and certainly not 300 years.

vations prove anything at all, they will corroborate the view that the so-called Geometric art had its origin in a mixture of influences, including that of the Mykenaean period (which was not 300 years in the past, but only a matter of a decade or two) together with Phoenician influence from peoples who moved into the area from other areas to fill the occupational gap that resulted from the Dorian invasion and the violent earthquake that destroyed the cities of Greece.

X. *Clarification of the Problem of Danaus and Aegyptus*

The problem of Danaus and Aegyptus was introduced in an earlier volume.[36] The problem is now more susceptible to a complete solution in the light of the more detailed consideration of the chronology of the legendary age of Greece.

In his list of kings of Dynasties XVIII and XIX, Josephus introduces the names of two kings, Sethosis and Armais by name, who were brothers.[36a] According to Josephus, Sethosis left his kingdom in the hands of his brother who, in his brother's absence, usurped the throne. On hearing of his brother's act, Sethosis returned to Egypt, recovered his throne, and banished his brother from Egypt. Josephus, quoting Manetho, says that "Sethosis was himself called Aegyptus, as was his brother Armais called Danaus."

According to the Greek legends, Danaus and Aegyptus were the twin sons of Belus, who in turn was a twin brother of Agenor.[37] It has been presumed by some that the Danaus of Josephus is the same person as Danaus (the son of Belus) who had a twin brother, Aegyptus. This identification is out of the question by any chronology or thesis, except as one presumes complete confusion of the interrelationships between the characters noted in the Greek legends. The lineage of this Belus may also be traced to the era of the Trojan war[38] (see Table VI). By this genealogy, Danaus and Aegyptus, sons of Belus, were of the 8th generation prior to the war and hence were probably born prior to the flood of Deucalion. This was well over a century before the era of Seti I (who is identified in the revision with this Sethosis of Josephus) and still another century earlier if this Sethosis is identified as Seti II.

It is not at all anachronistic that Belus and his two sons belong to the era before the flood of Deucalion, since they did not live in Greece; they lived in Egypt, in spite of their Greek origin. The following statements are from a modern review of the pertinent legends:[39]

> . . . According to the common story he [Danaus] was a native of Chemnis, in the Thebais in Upper Egypt, and migrated from thence to Greece. (Herod. ii, 91). Belus had given Danaus Libya, while Aegyptus had obtained Arabia. Danaus had reason to think that the sons of his brother were plotting against him, and in fear or on the advice of an oracle (Eustath. *ad Hom.* p. 37), induced him to build a large ship and to embark with his daughers. . . . At Argos a dispute arose between Da-

> naus and Gelanor about the government, and after many discussions the people deferred the decision of the question to the next day. At its dawn, a wolf rushed among the cattle and killed one of the oxen. This occurrence was to the Argives an event which seemed to announce to them in what manner the dispute should terminate, and Danaus was accordingly made king of Argos.

From the legends, we gather that at the time Danaus migrated to Greece, the king of the Argives had the name Gelanor. Nothing seems to be known about the origin of this Gelanor other than that there was an apparent blank in the history of Argos before him. We learn also from the legends that Agenor, brother of Belus, also migrated out of Egypt through Palestine into Phoenicia where he became king of this area. Since there were 8 further generations between Belus and the Trojan war, and since there is no name among the Phoenician kings as given by Josephus who could be equated with Agenor, it follows that the migrations of Belus and Agenor into Greece must have followed shortly the flood of Deucalion. By this time, Belus and Agenor had grandchildren of marriageable age. Hence the number of new generations to be accounted for prior to the Trojan war is but six. This alleviates the chronological squeeze which would result from presuming that Belus and Agenor were born in Greece after the flood.

This explanation places the usurpation of the Argive throne from Gelanor by Danaus in the same general era as that of Agenor, twin brother of Belus. We thus make bold to suggest that the Gelanor from whom Danaus usurped the Argive throne was none other than his uncle Agenor who had migrated to Greece earlier. This explains why Danaus selected Argos as the destination of his flight from Egypt and explains at the same time the assignment of the names Danaus and Aegyptus to the brothers Sethosis and Armais. The Egyptians were evidently aware of this previous history of these twin brothers and the flight from Egypt of one of them under the pressure of a brother. Both incidents also contained the factor of a usurped throne. Recognizing the similarity in the two cases, Sethosis and Armais were given the "nicknames" Danaus and Aegyptus.

XI. The Flood of Deucalion

The incident of the flood of Deucalion is of interest in this connection because it is also mentioned in both Greek

TABLE VI

The Lineage of Belus*

Belus	Twin brother of Agenor
Danaus & Aegyptus	Twin sons of Belus
Lynceus	Only surviving son of Danaus
Abas	Son of Lynceus
Acrisus	Son of Abas
Danae	Daughter of Acrisus
Perseus	Son of Danae
Sthenelus	Son of Perseus
Eurystheus	Son of Sthenelus and contemporary of Hyllus, son of Heracles. Heracles lived one generation before the Trojan war.

*This lineage may be traced by reference to the individual names in S-DGRBM.

and Egyptian literature. The single reference relating the incident to Egyptian history is the note following the name of Misphragmuthosis of Manetho's Dynasty XVIII, stating that the incident occurred in this reign.[40] This Misphragmuthosis is taken to be the same king known on the monuments as Thutmose (III), whose monuments claim a reign of 54 years, which figure obviously includes all the reign of Hatshepsut. He is currently dated 1501-1447 B.C., based on the Sothic dating method.[41]

According to the Greek legends, Deucalion was the son of Prometheus (not to be confused with the son of Minos of Crete, who had the same name).[41a] Deucalion and his wife believed themselves to be the only survivors of a flood that inundated the land. That such a catastrophe occurred is confirmed by the fact that while the descendants of Deucalion can be traced to the era of the Trojan war, his ancestry cannot be traced beyond the name of his father, though several other characters of the legendary age can also be traced back to about this same point. Deucalion was the father of Orestheus, Amphictyon, and Hellen, the descendants of the latter to the Trojan war, spanning seven generations (Table VII). The seventh generation is represented by Glaucus who died in the war, evidently as a young man, since he left no known descendants.

The dating of the incident of the flood is of interest, first in providing an approximate date related to the fall of

Troy, and secondly as confirmation of the altered chronology of Egypt, which recognizes a much shorter period between the reign of Thutmose III and the Trojan war than is conceivably possible by current views. By current views, the period from the flood of Deucalion, dated at some point in the reign of Thutmose III, would have a duration between 320 years (1501-1180) and 238 years (1447-1209), with a minimal period of 270 years being more probable. Even the minimal figure requires recognition of 34 years as an average generation. By the altered chronology, the maximum figure is 162 years (based on a date 952 for the beginning of the reign of Thutmose III and reaching to 790 B.C. for the fall of Troy). This allows the reasonable figure of 23 years to a generation, leaving a margin above what might be regarded as minimal for a generation.

While, admittedly, one cannot put an absolute confidence in the statement of Africanus, the statement is at least not anachronistic to the altered chronology.

TABLE VII

The Lineage of Deucalion

Deucalion	Contemporary of Thutmose III after Africanus
Hellen	
Aeolus	
Sisyphus	
Glaucus	
Bellerophon	
Hippolocus	
Glaucus	Died in the Trojan war, evidently as a young man

XII. An Unwarranted Expansion of Greek Chronology from Alexander to the Trojan Heroes

When Alexander was required to produce a genealogy back to the Trojan war heroes, he was able to present such a genealogy back to Heracles.[42] This was probably through Caranus, the founder of the Macedonian line of kings of which Alexander the Great was a late king. A number of statements appear in the writings of the ancient Greeks dealing with time periods defined in terms of the number of intervening generations. These would seem to be far more reliable for chronological purposes than the widely divergent views among the ancients on the matter of elapsed time between certain persons or incidents. For if Alexander was able to produce a complete genealogy back to Heracles, then it may be assumed that others were able to do the same thing.

According to the Parian Marble inscription, confirmed by statements by Theopompus and Euphorus,[13] Pheidon, brother of Caranus, was the eleventh generation from Heracles. The line of Macedonian kings from Alexander back to its founder Caranus is known in its entirety, though the lengths of many of the reigns are not known. The names of these kings are provided in Table VIII. The number of kings for this period is 17. However, it is known that Archelaus was an illegitimate descendant and that Pausanius and Areopus II-Orestes were also not of the line of Alexander. The legitimate genealogy of Alexander may be traced around these names, since it is known that Amyntas II was the nephew of Perdicas II,[14] and hence of the same generation as a son would have been. The number of generations from Alexander to Caranus inclusive is thus 14.

Of the eleven generations from Heracles to Caranus, that of Caranus is included in the 14 noted above. Hence, if we calculate from an estimated date when Heracles was c. 22 years old to the date when Alexander the Great was 22 years old, the period is spanned by 23 generations. By the popular chronology, these 23 generations encompass the period from an estimated date 1240 B.C. for the 22nd year of Heracles to 334 B.C., when Alexander was 22 years of age. In round numbers, the period is 900 years. This demands 39 years for an average generation, which figure is far too high and out of the question. The same period as calculated by the revised chronology is spanned by the date c. 845 to 334 B.C., or 500 years in round numbers. The average generation was then 22 years, a figure which is very acceptable, since an age of 20 was regarded by the Greeks as satisfactory for marriage, and since our figures are approximations.

Using this same average figure for a generation, Caranus would be 22 years of age c. 620 B.C. This figure is confirmed by Herodotus' statement that Pheidon, brother of Caranus, was father of Leocedes, one of the many suitors for the hand of Agaristus, daughter of Cleisthenes of Sicyon.[15] It has been calculated that Cleisthenes could not have died earlier than 582.[16] On this basis and the known incidents of his career, he is given a career span c. 625-582. Pheidon has been assigned dates reaching from c. 600 to c. 900, with a date 750 B.C. being regarded as most probable. The date, like so many others of the ancients expressed in years, is too high by well over a century.

TABLE VIII

The Line of Macedonian Kings

Kings	Relationship	Generation No.
Caranus	Founder of the line	1
Coenus	Son of Caranus	2
Thurimas	Son of Coenus	3
Perdiccas I	Son of Thurimas	4
Argaeus	Son of Perdiccas I	5
Philippus I	Son of Argaeus	6
Aeropus I	Son of Philippus I	7
Alcetas	Son of Aeropus I	8
Amyntas I	Son of Alcetas	9
Alexander I	Son of Amyntas I	10
Perdiccas II	Son of Alexander I, brother of Philippus who is father of Amyntas II	11
Archelaus	Illegitimate son of Perdiccas II	
Areopus II-Orestes	Of the line of Archelaus; Aeropus was guardian of Orestes.	
Pausanius	Of the illegitimate line	
Amyntas II	Son of Philippus, brother of Perdiccas II	12
Perdiccas III	Son of Amyntas II	13
Alexander	Son of Perdiccas III	14

XIII. Synchronizing the Histories of Greece and Rome

According to legend, Rome was founded by Romulus, a twin brother of Remus. The accepted date is 753 B.C.[47] Of the legends dealing with the founding of Rome, some are of Greek origin and some are of Roman origin. These contradict each other, preventing a synchronism that would be vital to clarifying the problems of Greek chronology. The Greek legends, for the most part, identify Romulus as the son, or more commonly, the grandson of Aeneas of the Trojan war era.[48] This would agree with the proposed revision which places the fall of Troy c. 790 B.C. The legends of Roman origin, on the other hand, indicate that Romulus was but a distant descendant of Aeneas.[49] This concept might be interpreted to favor the popular view which recognizes a 300-year gap between the Trojan war and the founding of Rome. All of these legends have an origin later than 753 B.C., and the one thing that is apparent is that the ancient writers were not clear on the chronology of the past history of their peoples.

Notes and References

(1) K-G, pp. 16ff.; B-SKC, pp. 4ff. (2) B-TT, Chap. 2; B-SKC, Chaps. II, III. (3) See refs. 1, 2. (4) For examples, see refs. 1, 2; H-I, p. xi. (5) H-I, p. viii. (6) W-M, pp. 149, 151. (7) *Ibid.*, p. 245. (8) D-BGA, Table, p. 22. (9) T-PW, p. 40; cited in D-BGA, p. 282. (10) See Table V. (11) CH, "Dorians;" B-SKC, p. 19; D-BGA, p. 281; *Ibid.*, p. 280. (12) See Chap. V, note of ref. 87. (13) See Sect. VIII with references given. (14) B-HH, p. 240. (14a) A later Alexander was able similarly to prove his lineage back to the legendary era (R-CH, Vol. III, p. 50). (15) R-AM, Vol. I, p. 149n. (16) L-ARAB, Vol. I, p. 260. (17) R-CH, p. 264. (18) S-DGRBM, "Dido." (19) *Ibid.* (20) C-H, "Romulus." (20a) A date c. 790 B.C. for the fall of Troy may be derived from the date 852 B.C. for the end of the reign of Amenhotep III (Vol. I, Chap. XVI, Sect. IX, par. 3). The period for the reigns of the subsequent kings to the banishment of Harmhab is 50 years. He was followed by the 1 year reign of Rameses I, the 5 years by Amenmeses and much of the 7 years of Thuoris in whose reign the fall of Troy occurred, leading to a date c. 790 for the fall of Troy. (21) P-HE, Vol. III, p. 150. (22) B-HE, p. 464. Not all scholars admit the participation of the Sea Peoples in the reign of Merneptah. (23) D-BGA, p. 282. (24) C-GUA, p. 23. (25) D-BGA, p. 265. (26) Vol. I, Chap. XVII, Sects. II, III. (27) See "Homerus" in S-DGRBM for this and subsequent data. (28) W-BA, p. 87; see 3rd quot. of ref. 11. (29) K-G, p. 44. (30) D-BGA, p. 283. (31) CH, "Dorians;" C-GUA, p. 20; D-BGA, pp. 283, 284; B-HH, p. 30. At this time all the existing cities on the mainland of Greece were destroyed (K-G, p. 18). (32) Chap. VI. See ref. 30 for recognition that this same catastrophe extended over a far wider area than Greece. (32a) This same anomaly exists relative to the evident continuation of the celebration of the Olympic games through this period. These games were considered anciently as having been instituted by Heracles prior to this assumed hiatus, yet the celebration appears rather immediately following this assumed break, in the era of Lycurgus (S-DCA, "Olympian Games"). Lycurgus was the brother of Polydectes (CH, "Lycurgus"), who belongs to the period *after* the hiatus (Table V). (32b) D-BGA, p. 281; see quot. of ref. 11). (33) *Ibid.*, p. 270ff. (34) *Ibid.*, p. 271. (35) *Ibid.* (36) Vol. I, Chap. XVII, Sect. VII. (36a) J-AA, Bk. I, par. 15. (37) S-DGRBM, "Danaus." (38) *Ibid.*, by tracing the names through the series given in Table VI. (39) See ref. 37. (40) W-M, p. 113. (41) See Chap. IV for a refutation of the validity of this dating method. (41a) CH, "Deucalion." (42) See ref. 14. (43) S-DGRBM, "Pheidon." (44) *Ibid.*, "Amyntas." (45) See ref. 43. (46) *Ibid.*, "Cleisthenes." (47) CH, "Romulus." (48) S-DGRBM, "Romulus." (49) *Ibid.*

CHAPTER XVII

THE ERA OF HAMMURABI AND RELATED PROBLEMS IN ASSYRIAN AND CHALDEAN CHRONOLOGIES

So far in this work, attention has been largely directed toward showing that there *is* a chronology of Egypt which not only can be satisfactorily encompassed within the shortest possible interpretation of Scriptural chronology, but which is also internally consistent and which eliminates a large number of the difficulties now confronting historians and archaeologists. A number of these solved problems are related to the provision of the proper backgrounds for unique incidents in Biblical history such as the Exodus, the Conquest, the Oppression, the Descent, the Famine of Joseph, the fallen walls at Jericho, the final end of the walled city at Ai, the destruction of the city of Shechem by Abimelech, the origin of the city built by Omri, the conquest of Gezer by an unnamed Egyptian pharaoh, the sacking of Solomon's temple, Asa's war with the Egyptian armies, the fall of Israel to the Assyrians, the Dispersion, as well as provision of the proper background for the origin of the Philistines in Palestine. But many other problems provided solutions by the same alteration are quite unrelated to Scripture. The fact that solutions are provided to problems of both types by the same alteration in Egyptian chronology places this proposed chronological revision in a position to compete with the popular views as one meriting the serious consideration of the scholarly world.

If this revised chronological structure is even approximately correct, it is demanded that the chronologies of Assyria and Chaldea shall also be provided a satisfactory background in terms of this revision. The case may even be stated more strongly. If this revision is even approximately correct, it may be expected also that the setting of the chronologies of Assyria and Chaldea against this revised background will result in the appearance of new and significant synchronisms. The purpose of this chapter is to demonstrate that these demands and expectations are met, in some cases in a most surprising manner.

I. The Problem of Dating Hammurabi

Few problems of ancient chronology have been the topic of more extensive debate among scholars than the dates to be ascribed to the Babylonian king Hammurabi and his dynasty, now known as the First Dynasty at Babylon. The dates in the 23rd century B.C., attributed to this king by earlier historians, have had to be periodically reduced so that now he holds a precarious position in the late 18th century, with differences of opinion still amounting to nearly a century. With Hammurabi floating about in a liquid chronology of Chaldea, it was not possible to arrive at solid concepts relative to the chronology of Assyria. The earlier dates attributed to Hammurabi had to be abandoned with the appearance of a synchronism between Hammurabi and Samsi-Adad I of Assyria, *apparently fixed in the late 18th century B.C. by the more recently discovered Khorsabad king list. However, problems of no mean proportions remain as enigmas.*

II. The Problem of the Kassite Dynasty

With the end of the Kassite dynasty necessarily fixed to the approximate date 1180 B.C., there is a notable deficiency in time after the end of the First Dynasty at Babylon (variously dated from c. 1600 to c. 1535 B.C.) for the subsequent history of the Kassites. The Kassite dynasty is assigned a duration of 576 years by the Babylonign king list A, yet no such period of time is available for the dynasty after 1600 B.C. Attempts to set the reigns of the known Kassite kings within the reduced period available, while retaining the known synchronisms otherwise, have not been altogether satisfactory. An alternate proposal, which has not been generally accepted, would recognize that the Kassite dynasty overlapped the period of the First Dynasty at Babylon, back at least as early as the reign of Hammurabi.

III. The Problem of the Antiquity of Assyria

Early historians regarded Chaldea as having an antiquity equivalent to that attributed to Egypt, going back into the 5th or 6th millennium B.C. With the compelling influence of data from radiocarbon dating, the historic era of Egypt has been severely trimmed to a proposed beginning between 3300 and 2800 B.C. Some scholars believe that the ultimate in reduction in dates for the beginning of the historic period in Egypt has been reached, while others candidly admit that even these dates cannot be considered as secure. With this reduction in the antiquity of dynastic Egypt, there has been, of necessity, a corresponding reduction in the presumed antiquity of the dynastic period in Mesopotamia, since both are recognized as having begun at approximately the same time, i.e., at the beginning of the Early Bronze age.[1]

It is not clear from the reading of Genesis 10:8-12 whether Assyria had its beginnings at the time of Nimrod, grandson of Noah, or whether the migration of Assur from Chaldea and the building of Ninevah was at a later time. It is to be noted that an association of this Assur with the Asshurim, descendants of Abraham,[2] is not to be eliminated *per se*, since the Genesis account was evidently written by Moses while he was in Midian, and in either case, he is writing of past events. The more recently discovered Khorsabad list provides the names of 24 kings for whom there is no other extant mention. Seventeen of these are stated to have ruled from tents, indicating a beginning of organized rule in Assyria at a time when the population was sparse. This problem will be introduced again in the light of subsequent developments to be presented in this chapter.

IV. The Problem of the Hitties as Related to Assyrian Chronology

As noted in a previous volume,[3] there are serious anachronisms that result from the popular dating of the beginnings of the Hittites in Anatolia about the beginning of the 19th century B.C. The dating of their demise at the hands of the Sea Peoples, dated c. 1200 B.C., leaves an incredible gap of 500 years between the end of the Hittite empire and the eventual disappearance of Hittite culture.[4] During this "blank" interval, the Assyrian inscriptions continue to refer to the Hittites as an organized people with kings over them and with armies capable of waging war with neighboring peoples.[5] Even the names of some of these Hittite kings are given in the Assyrian inscriptions. These data provide a strong suggestion that all is not well with the currently accepted placement of the Hittite era on the B.C. time scale.

V. *Problems Related to the Correlation of Assyrian and Philistine Histories*

According to Scripture, the Assyrians and the Philistines were competing for occupation of the diminishing territory controlled by the Israelites in the 8th century B.C. While the Philistines appear to have come out second best in this conflict with the Assyrians, it is nevertheless clear that the Philistines represented a people to be dealt with in the area south of Palestine during this period of Assyrian encroachments into Israelite territory. Yet the archaeological evidences of the Philistines in this territory are being currently dated in the time of Saul, with no indication of their presence in this area in the era currently assigned archaeologically to the 8th century and later. [5a]

VI. *Anachronisms Between Assyrian and Egyptian Chronologies*

The severe anachronims that result from the proposed identification of Shishak of Scripture with Sheshonk I of Dynasty XXII have been discussed in detail[6] and need not be reviewed here. These and numerous other anachronisms were eliminated with the recognition that Dynasty XXII was indeed Assyrian in origin, as indicated by the Assyrian origin of the names of the kings.[7] The dynasty belongs in the 7th century B.C., when the Assyrian armies are known to have been on Egyptian soil.

Note: From this point in the discussions of this chapter, reference to individual kings will be made by such a designation as No. 112A, which is to be taken as reference to the king number 112 in Table A.

VII. *The Solid Basis on Which Late Assyrian Chronology Rests*

The chronology for the later period of Assyrian history (933 B.C. and later) has remained essentially fixed for the last-half-century and more. The kings of this era are well-known by name, and the lengths of the individual reigns are fixed with a high degree of accuracy and certainty. The chronological structure is established by the Canon of Ptolemy, the Assyrian Canon, and the extant Eponym lists of the kings. The Assyrian kings followed the practice of naming each year of reign after the king himself, or after one of his important officials, or after some significant incident in the year of his reign. These "eponym" lists thus provide a check on the number of years of reign to be credited to each king. The correctness of the deductions from these various sources is further confirmed by the record of the Great Eclipse, which can be dated with reasonable certainty in the year 763 B.C. This eclipse is stated to have occurred in the 10th year of the reign of Assur-dan (No. 106A), whose reign may be thus synchronized with the B.C. time scale as having belonged to the years 772-755 B.C. The dates of the other reigns may then be calculated from the date for Assur-dan III by means of data on the lengths of the reigns of the individual kings. The kings of this phase of Assyrian history are given as Table A. *These dates are here accepted without reservation.*

TABLE A

The Assyrian Kings from 933 B. C.

98.*	Assur-dan II	934-912 B.C.	108.	Tiglath-pileser III	744-727
99.	Adad-nerari II	911-891	109.	Shalmaneser V	726-722
100.	Tukulti-Ninurta II	890-884	110.	Sargon II	721-705
101.	Assur-nasir-pal	883-859	111.	Sennacherib	704-681
102.	Shalmaneser III	958-824	112.	Esarhaddon	680-669
103.	Shamsi-Adad V	823-811	113.	Assur-bani-pal	668-633
104.	Adad-nerari III	810-783	114.	Assur-etil-ilana	632-629
105.	Shalmaneser IV	782-773	115.	Sin-sumu-liser	?
106.	Assur-dan III	772-755	116.	Sin-arra-iskun	623-612
107.	Assur-nerari V	754-745	117.	Assur-uballit II	611-

*The numbers preceding the names of the kings are the numbers of the kings which preceded the king according to the more complete king list discovered at Khorsabad. The Roman numerals following the names are of modern creation and represent the accepted order of reign of several kings who had the same name.

VIII. The Early Development of the Conventional Chronology of Assyria Prior to 933 B.C.

An approximate chronology of Assyria for the era prior to 933 B.C. was developed by early Assyriologists by allowing some set reign length as an average for the reigns not otherwise known, but which were known, or believed, to have followed in sequence. The resulting structure was then adjusted to meet two time intervals referred to by Sennacherib (No. 111A) and to meet a presumed synchronism between Assur-uballit (No. 73B) and the Amarna Letters. Sennacherib stated that a period of 418 years had elasped between Tiglathpileser I (No. 87B) and his own time, and that 600 years had elapsed from the reign of Tukulti-Ninurta I (No. 78B) to his own time.[8]

Early historians tended to place explicit confidence in the validity of such statements as representing true elapsed time, and the developing chronology was securely bound to them.[9] Based on the assumption that the ʿApiru of the Amarna Letters were the invading Hebrews,[10] and that the Assur-uballit of these letters was the 14th century Assyrian king by this name, the proponents of the XVIIIth Dynasty theory of the Exodus assumed a date for Assur-uballit c. 1400 B.C. to agree with an Exodus dated in 1445 B.C. However, calculations based on the Khorsabad list yields dates for this Assur-uballit which are too late (1362-1327) to agree with any phase of the Conquest within the lifetime of Joshua. A more careful scrutiny of these letters has convinced most scholars that they do not picture an invasion,[11] the disturbances mentioned rising from the actions of certain rebellious groups within the territory. Any identification of the ʿApiru with the Hebrews must be so severely qualified as to provide no support for an XVIIIth Dynasty setting of the Exodus.[11a]

The dating of Assur-uballit does not permit the interpretation of Sennacherib's 600-year period as elapsed time, except as a rough approximation. This situation should provide the necessary clue for deducing that these time periods of the ancients are not to be taken as necessary expressions of elapsed time, except as this can be otherwise confirmed.[12] A chronology is not necessarily correct simply because one or more of these time periods can be fitted into the proposed structure.

While many of the dates previously attributed to the early Assyrian kings have since been found to be in gross error, king lists had nevertheless been devised which have shown a surprising agreement with the *sequence* provided by the Khorsabad list. Such a list was compiled by Meissner many years ago.[13] That part of the list encompassing the period from 933 B.C. back to King Adasi (No. 47B), and corrected by the Khorsabad list, is provided as Table B. The more familiar names of certain of the kings as given in

Scripture are retained. The renderings given by Poebel are favored in cases of wide discrepancy. The dates are calculated from the reign lengths as given in the Khorsabad list. These calculations indicate a date for Adasi in 1648 B.C., a date to which reference will be made in a later connection, relating it to a new synchronism which appears with the subsequent developments. While the careful comparison of the data in this list with other available data led Poebel to recognize a few minor discrepancies, *these dates back to Adasi are here accepted within the limitations recognized.*

TABLE B

Assyrian Kings from Adasi to Assur Dan II
(Synthesized from Synchronistic Chronicle, Meissner's list, and
Corrected to the Khorsabad List)

47. Adasi	1648B.C.
48. Bel-bani	1647-1638
49. Shabai (Labaiiu)	1637-1621
50. Sharma-Adad	1620-1609
51. Gimil-Sin (En-tar-Sin)	1608-1597
52. Zimzai (Bazzaiiu)	1596-1569
53. Lullai	1568-1563
54. Shi-Ninua (Su-Ninua)	1562-1549
55. Sharma-Adad (II)	1548-1546
56. Erishu (III)	1545-1533
57. Shamsi-Adad (II)	1532-1527
58. Isme-Dagan (II)	1526-1511
59. Shamshi-Adad (III)	1510-1495
60. Assur-nirari	1494-1469
61. Puzur-Assur (III)	1468-1455
62. Enlil-nasir (I)	1454-1442
63. Nur-ili	1441-1430
64. Assur-saduni	1430
65. Assur-rabi (I)	1430
66. Assur-nadin-ahhe	1430
67. Enlil-nasir (I)	1430
68. Assur-nirari (II)	1423-1417
69. Assur-bel-nishesu	1416-1408
70. Assur-rim-nishesu	1407-1400
71. Assur-nadin-ahi (II)	1399-1390
72. Eriba-Adad I	1389-1363
73. Assurr-uballit (I)	1362-1327
74. Enlil-nirari	1326-1317
75. Arik-den-ili	1316-1305
76. Adad-nirari (I)	1304-1273
77. Shalmaneser (I)	1272-1243
78. Tukulti-Urta (I)	1242-1206
79. Assur-nadinpapli	1205-1203
80. Assur-nirari (III)	1202-1197
81. Enlil-kudur-usur	1196-1192
82. Urta-apal-Ekur (I)	1191-1179
83. Assur-dan (I)	1178-1133
84. Urta-tukulti-Assur	-1133
85. Mutakkil-Nusku	1133
86. Assur-resh-ishi (I)	1132-1115
87. Tiglath-pileser (I)	1114-1076
88. Urta-apal ekur (II)	1075-1074
89. Assur-bel-kala (I)	1073-1056
90. Eriba-Adad (II)	1055-1054
91. Shamshi-Adad (IV)	1053-1050
92. Assur-nasir-appli	1049-1031
93. Shalmaneser (II)	1030-1019
94. Assur-nirari (IV)	1018-1015
95. Assur-rabi (II)	1012-972
96. Assur-resh-ishi	971-967
97. Tiglathpileser (II)	966-935

IX. The Khorsabad King List

This list of Assyrian kings was discovered at Khorsabad in the course of investigations conducted during the season

1932-33 by the Oriental Institute of the University of Chicago. The responsibility for the publication of the detailed report was assigned to A. Poebel; the report appeared in the *Journal of Near Eastern Studies* of July 1942. The list includes the names of forty-six kings before that of Adasi (No. 47B). The first 17 of these are said to have ruled from tents, leading us back into an era which would appear to have been characterized by a sparse and non-sedentary population. This suggests that these names belong indeed to the very beginnings of Assyrian history, a point of later significance in attempting to establish its origin in terms of Biblical history.

X. *Synchronizing Assyrian and Hittite Chronologies*

In a previous volume,[14] the basis was outlined for setting the Exodus in the reign of Koncharis, a late king of Dynasty XIII, some 34 years after the close of Dynasty XII. Evidently, at the end of Dynasty XII, one of the more powerful princes of Dynasty XIII took over the throne without difficulty and after two reigns, the incident of the Exodus occurred. This incident was set coincident with the invasion of Egypt by the Hyksos. Some 40 years later, the Israelites conquered the territory of Palestine under Joshua. Among the displaced peoples were the Hittites. The Hittites were driven out of Palestine at that time, but were permitted to find a new home for themselves. This they did by migrating northward into the territory now known as Anatolia in Asia Minor, where the home of the Hittites has been discovered archaeologically. However, the Hittites of archaeology were an Indo-European race, coming into this territory from the west and not from Palestine to the south. The Hittites of archaeology should then be recognized as this race which absorbed the culture and the name of the Hittites, who had been driven out of Palestine at the time of the Conquest.[15]

The writer contends that the failure of modern scholars to recognize this relationship between the Hittites of archaeology and the Hittites of Scripture from the time of the Conquest represents a fundamental error that has prevented the attainment of a consistent solution to the problems in *the chronology of Mesopotamia.* It is the recognition of this situation that stands as the key to the solution to the problems here defined.

We do not know how long the Hittites from Palestine lived in Asia Minor prior to their absorption by the European race. The establishment of the length of the period is not critical to the developing chronological structure. Whether we regard this incident as having occurred rather immediately after the banishment from Palestine, or after a period of 50 years or more, this only alters the average length of reign to be assigned to the first seven of the Hittite kings, these reign lengths not being known. At this point in the line of Hittite kings, a synchronism is available for tying together the chronologies of the Hittite and Assyrian lines of kings through the medium of the Chaldean kings. The evidence is interpreted by the writer to indicate that this period, between the expulsion of the Hittites from Palestine and the subsequent absorption by this western race, was not in excess of 50 years.

Current views on Hittite chronology place the beginnings of this people in Asia Minor at about the opening of the 19th century. This dating, as an approximation, was based on the number of kings in the known line of Hittite rulers and the well-established synchronism between the Hittite king, Muwatallis (No. 25C), and Rameses II, dated 1293-1227.[16] The Hittites were thus given a period of about seven centuries. With Egyptian chronology set too far back on the time scale by a multiplicity of centuries, the period assigned to the Hittites was thus also set back too far by a similar period of time. While the anachronisms with Assyrian history that resulted from this setting must have been recognized by early scholars, the difficulties evidently appeared minor compared with the difficulties that would result from moving the date for Rameses II foreward on the time scale by a plurality of centuries. Individual scholars were thus left with their own ingenuity to find a way around these anchronisms in whatever manner seemed least incredible. These anachronisms have been previously introduced.[17]

Evidence is now introduced in support of the view that the Hittites of archaeology are *not* the Hittites of the Conquest era, and that the people now known as the Hittites belong to the post-Conquest era. Among the Assyrian references to Hittite kings is one by Tiglath-pileser (No. 87B; 1114-1076 B.C.) which states that he invaded the territory of the Hittites at a time when the reigning king had the name Ilu-Teshup.[18] *The date is nearly a century later than the date currently attributed to the absorption of the last of*

TABLE C*

The Kings of the Hittites

King No.	Name	Conventional Dates (approx)	Synchronisms	Revised Dates
1.	Pitkhanus			1400
2.	Anittas	1900 B.C.		
3.	Tudhaliyas	1740-1710		
4.	Pusarrumas	1710-1680		
5.	Labarnas	1680-1650		
6.	Hattusilus	1650-1620		
7.	Mursilis I	1620-1590	Conquers Babylon	1265
8.	Hantilis I	1590-1560		
9.	Zidantas I	1560-1550		
10.	Ammunas	1550-1530		
11.	Huzziyas	1530-1525		
12.	Telipinus	1525-1500	Conquered by Tiglath-pileser	1110
13.	Alluwannas	1500-1490		
14.	Hantilis II	1490-1480		
15.	Zidantas II	1480-1470		
16.	Huzaiyas II	1470-1460		
17.	Tudhaliyas II	1460-1440		
18.	Anuwandas I	1440-1420		
19.	Hattusilis II	1420-1400		
20.	Tudhaliyas III	1400-1385		
21.	Arnuwandis II	1385-1375		
22.	Suppiluliumas I	1375-1335	War with Shalmaneser III	825
23.	Arnuwandis III	1335-1334		
24.	Mursilis II	1334-1306		
25.	Muwatallis	1306-1282	Battle with Rameses II	786
26.	Urti Teshub	1282-1275		
27.	Hattusilis II	1275-1250	Daughter marries Rameses II	
28.	Taddaliyas	1250-1220		
29.	Arnuwandas II	1220-1190		
30.	Suppiluliumas II	1190-	Hittite empire ends with the invasion by the Sea Peoples	700

*The king list and the conventional dates are from Ceram, *Secret of the Hittites*. These lengths of reigns, as approximations, are deduced from the meager evidences of accomplishment. The dates are based on the currently accepted dates in Egyptian chronology for Rameses II, and the accepted dates for the First Dynasty at Babylon.

the city states by the Assyrians. It is thus of considerable interest to see what happens to this anachronism, and to the entire chronology of the peoples of Mesopotamia, when the Hittites are given an origin in Asia Minor following the conquest under Joshua.

While we do not know the lengths of the reigns of the individual Hittite kings, we do know their names and the order of their reigns for the most part. By allowing an average reign of 16-20 years, as is commonly done for estimating the period encompassed by a consecutive line of kings otherwise, there is room for 12-15 kings to the point of this conquest of the Hittites by Tiglath-pileser. If our reasoning has been correct, we should expect to find, at this approximate point, evidence in the Hittite inscriptions to confirm this invasion. As we examine the list of Hittite kings (Table C), we come to the name Telipinus (No. 12C). The name has a strange resemblance to that of Ilu-Teshup, who was reigning at the time of the conquest by Tiglath-pileser, the difference in the names being in the order of the consonant sounds, such deviation of order not being uncommon in the transliteration of names.

The identification of Telipinus with Ilu-Teshup is neatly confirmed by the Hittite inscriptions. In the reign of Telipinus, the Old Kingdom of the Hitties came to its end, only to be revived after an obscure period involving the reigns of several ephemeral kings. Gurney commented on the situation thus:[19]

> Telipinus is usually regarded as the last king of the Old Kingdom. From the middle of his reign, the historical sources fail and the names of his immediate successors cannot be stated with certainty. This obscure period fills the interval between Telipinus and Tudhaliyas II [Nos. 12-17C], the founder of a new dynasty and first king of the empire.

It was thus Tiglath-pileser I who was responsible for bringing to an end the Old Kingdom of the Hittites. Current views, of course, did not permit association of this disaster with the inscription of Tiglath-pileser I, whose reign was dated a full century *after* the date attributed to the *end* of the empire!

A second Assyrian reference provides still further confirmation of the correctness of the necessary movement of Hittite chronology forward by half a millennium or more.

Shalmaneser III (No. 102A; 858-824 B.C.) warred against a coalition of kings, one of whom was a Hittite king by the name Supilulme,[20] a name which cannot be mistaken for the Suppiluliumas (No. 22C) of the Hittite list, but currently dated c. 1375 B.C. rather than in the 9th century. These later dates in the 9th century fall in the Amarna period by the chronological revision here proposed. In later sections of this chapter,[21] it will be shown that the Amarna period does not belong to the 14th century, but rather to the era of Shalmaneser III in the mid-9th century. The problems that rise from the presence of the name Assur-uballit and the names of certain Kassite kings in the Amarna Letters are also considered in a later section.

XI. Synchronizing Chaldean Chronology with Hittite Chronology

With Hittite chronology set approximately, (See Fig. 5) it is now possible to set also in approximate manner the date for the end of the First Dynasty at Babylon. This dynasty came to its end as the result of a bold conquest by the Hittite king, Mursilis I (No. 7C).[22] Mursilis was murdered shortly after his return from this engagement; hence we may, for practical purposes, synchronize the end of the reign of Mursilis I with the end of the First Dynasty at Babylon. This synchronism is mentioned in both the Hittite and Assyrian inscriptions and is universally recognized by scholars. By virtue of the movement of the Hittite chronology forward on the time scale in agreement with Bible history, the chronology of the First Dynasty at Babylon must also be moved forward in a similar manner (see Fig. 5).

Assuming that a period of about 50 years elapsed between the migration of the Biblical Hittites into Asia Minor and their absorption by the new race, as has been done in the chart of Figure 5, and allowing the commonly accepted range of 16 to 20 years as an average for a series of reigns within a dynasty, the end of the reign of Mursilis I may be synchronized with the end of the First Dynasty at Babylon at c. 1230 B.C., a date which at this point is recognized as approximate. This date is confirmed as an approximation on the basis of synchronisms to be noted later. The First Dynasty at Babylon had a duration of 305 years, based on the summation of the reigns as given in Table D. However, it is known from the eponym list of Hammurabi that his reign was 43 years. While there may have been a factual basis for the figure 55, use of the shorter period gives a more exact figure for the period of the dynasty, which then may be calculated to have begun c. 1523 B.C. The reign of Hammurabi then falls in the period c. 1411-1368 B.C., the reign, for the most part, falling after the beginning of the Conquest.

XII. Synchronizing the Early Assyrian Chronology with That of the First Dynasty of Babylon

As noted in a previous section of this chapter, the line of Assyrian kings can be traced, by means of the Khorsabad list, back to a king by the name of Adasi, who, from the lengths of the reigns provided, is given a date 1648 B.C., which date is here accepted within the minor possible deviations noted by Poebel. Adasi is preceded in the list by the names of forty-six kings,[23] twenty-four of which are not known from any other source, and the first seventeen of which are stated to have ruled from tents, taking us back to an era of Assyrian history when the occupation of Assyria

TABLE D

Kings of the First Dynasty at Babylon[°]

King	Length of Reigns	Currently Assigned Dates	Revised Dates
1. Sumuabu	15 years	Assigned	1570-1555
2. Sumulail	35 years	dates	
3. Sabu, his son	14 years	vary	
4. Apil-Sin, his son	18 years	with	
5. Sumubalit, his son	30 years	dates	
6. Hammurabi, his son	55 years	assigned	1455-1400
7. Samsuiluna, his son	35 years	to	
8. Ebishum, his son	25 years	Hammurabi.	
9. Ammiditana	25 years	Most now	
10. Ammisaduga	22 years	in 18th	
11. Samsuditana	31 years	century B.C.	1296-1265

[°] According to the Babylonian King List B.

was represented by nomadic tribes. The current interpretation of the Khorsabad list recognizes these forty-six kings as having ruled in sequence *prior* to the reign of Adasi. While the dates for most of these forty-six kings are unknown, an estimate, based on average reign length, leads to a probable period of over half a millennium for the last thirty of the kings, even assuming that the others who ruled from tents were but contemporary rulers of small groups or tribes.

With this concept the writer deviates from popular opinion. While this list of forty-six kings undoubtedly had its beginning earlier than the reign of Adasi, the later kings of the list must have ruled contemporarily with the line of kings following Adasi. This follows from the recognition that the Hittite kings should be given a position in the post-Conquest era. Since the synchronism between the end of the First Dynasty at Babylon and the end of the reign of the Hittite king, Mursilis, is well-established, it follows that the kings of the First Dynasty at Babylon must be moved forward on the time scale by a time period commensurate with the movement of the Hittite kings. And since there are also two well-established synchronisms between the First Dynasty at Babylon and this line of early Assyrian kings, then this Assyrian line must be similarly moved forward on the time scale. But in moving this entire unit forward, there is no alternative to recognizing that this early Assyrian line must have been contemporary in part with the Assyrian line through Adasi (see Fig. 5).

If this concept is correct, it calls for a break in the line of Assyrian kings with the name of Adasi. There is clear evidence of such a break in the king list itself. Adasi is given a rule of zero years and was preceded by the reigns of five others, also given zero years of reign, all of whom are said to have been "sons of nobodies."[24] An unstable situation is clearly indicated just before the year 1648 B.C., a point of major significance in the subsequent developments.

One of the synchronisms tying the early line of Assyrian kings to the First Dynasty at Babylon is that between Ilusumma (No. 32E) of the former line with Samuabu, (1D) first king of the First Dynasty at Babylon (see Fig. 5). The other is between Samsi-Adad (No. 39E) and Hammurabi (No. 6D).[25] Thus, even though only a few of the Assyrian kings have known reign lengths, it is still possible to synchronize the line from Ilu-summa to Samsi-Adad with that from Samuabu to Hammurabi in an approximate manner. There are then thirty-one kings of Assyria before Ilu-summa to account for prior to the beginning of the First Dynasty at Babylon. Even if it is allowed that the first seventeen of these ruled contemporaneously as rulers of small tribes, there are still fourteen others. Of these early kings, those numbered 16 to 27 represent a father-son sequence, a point that must be considered in providing even an approximate date for the beginnings of Assyria.

It might be argued that if Assyria had been ruled by a dual line of kings during this period that this situation

TABLE E

The Kings of Assyria Whose Names Precede Those of Adasi
and his "Nobody" Predecessors*

1. Tudia
2. Adamu
3. Iangi
4. Kitlamu
5. Harharu
6. Mandaru
7. Imsu
8. Harsu
9. Didanu
10. Hanu
11. Zuabu
12. Nuabu
13. Abazu
14. Tillu
15. Asarah
16. Uspia
17. Apiasal, son of Uspia
18. Halu, son of Apiasal
19. Samanu, son of Halu
20. Ha(i)ianu, son of Samanu
21. Ilu-Mer, son of Ha(i)ianu
22. Iakmesi, son of Ilu-Mer
23. Iakmeni, son of Iakmesi
24. Iazkur-ilu, son of Iakmeni
25. Ilu-kapkapi, son of Iazkur-ilu
26. Aminu, son of Ilu-kapkapi
27. Sulili, son of Aminu
28. Kikkia
29. Akia
30. Puzur-Assur
31. Sallim-ahhe, son of Puzur-Assur
32. Illusumma, son of Sallim-ahhe
33. Erisu, son of Ilusumma
34. Ikunu, son of Erisu
35. Sarru-kin, son of Ikunu
36. Puzur-Assur, son of Sarru-kin
37. Naram-Sin, son of Puzur-Assur
38. Erisu, son of Naram-Sin
39. Samsi-Adad, son of Ilu-kapkapi
40. Isme-Dagan, son of Samsi-Adad
41. Assur-dugul, son of a "nobody"

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*Following the early king list from Khorsabad as given by Poebel.[26]

would be clearly revealed by extant inscriptions indicating synchronisms between the two lines. Admittedly, there are no such extant references. However, this does not prove that such a situation did not exist. The fallacy of the deduction requiring such evidence is apparent from the fact that *there are no known inscriptions of any kind* from the kings of the line of Adasi prior to the era of Samsi-Adad (No. 59B), and such meager materials for the subsequent kings as not to warrant any such conclusion.[27]

> . . . As of Adasi and Belubani, so also of their successors, Libaiiu, Sarma-Adad I, En-tar-Sin, Bazaiiu, Lullaiiu, Su-ninua, Sarma-Adad II, Erisu III, Samsi Adad II and Isme-Dagan II, we have to date no personal or contemporaneous inscriptions, nor is, as far as our present material goes, any reference to them found in later texts. Historically, therefore, the 127-year period represented by these ten kings (1638-1511 B.C.) still is a blank for us apart from the few facts that can be gathered from the king list itself.

Thus while there is no inscriptive evidence to tie these two lines to a common period, this arrangement *does* indicate a continuous organized government throughout the period without necessitating the assumption of a historical blank.[28] Evidently, it was this alternate line that represented the primary rule in Assyria during this period, the line of Adasi coming graduallly to the front, but becoming predominant only after the end of this primary line. The first really significant king of the line of Adasi was probably Assur-uballit (No. 73B).

The slight folding of the late dynasty, as shown in Figure 5, is made to meet the evidence that the reigns of Samsi-Adad and Naram-Sin were contemporary, at least for some fraction of the reigns.[29] This is possible, since Samsi-Adad is not a son of his predecessor (See Table E), his father, Ilu-kapkapi certainly not being the same person as the king by this name earlier in the list. Poebel regarded these two (or three) kings as constituting a different dynasty than that of Erisu. The manner in which the kings preceding Ilusumma of the synchronism are given their positions in the chronology will be considered in a later section of this chapter.[30]

XIII. Synchroniziing the Dynasty at Uruk with the Dynasty of Adasi

The document known as the Synchronistic Chronicle [30a] provides the name of the king of Assyria who ruled contemporary with the reigns of the kings at Uruk. The list begins with Adasi. It may be deduced from the damaged beginning of the list that his contemporary at Uruk was Damiqilishu or Damqiili of the Babylonian king list. In this latter source, there were two kings of Uruk who preceded Damqiili, and since Adasi had a reign of less than a year, the first three kings at Uruk would appear to antedate the year 1648 for Adasi. The very high number of years credited to the kings suggests that these reigns must have overlapped considerably, and this is confirmed in terms of the revised chronology by the fact that the period from Adasi to Eaga, last king at Uruk, contemporary of Erishu (No. 56B), could not have exceeded a century by more than a very few years (see Figure 5).

XIV. Synchronizing the Dynasties at Isin and at Larsa with the First Dynasty at Babylon

The *end* of the dynasty at Larsa can be synchronized to the early reign of Samsuiluna (No. 7D) of the First Dynasty at Babylon. Hammurabi, his predecessor, had conquered Rim Sin, last king at Larsa,[31] evidently permitting him to rule under some unstated arrangement. On the death of Hammurabi, Rim-Sin rebelled, making a second conquest necessary by Samsuiluna.[32]

The names and lengths of reigns of the kings at Larsa are known for the most part, permitting an approximate duration for the dynasty of 265 years. The date for the beginning of the reign of Samsuiluna was set at c. 1368 B.C., based on the dating of the end of the dynasty with the end of the reign of Mursilis of the Hittites, which date was of necessity approximate. Based on the acceptance of this date as approximate, the beginning of the dynasty at Larsa belongs to the date c. 1630 B.C., a date that falls in the same era as the beginning of the dynasty of Adasi.

The dynasty at Larsa and the parallel dynasty at Isin are recognized as having had their rise shortly after the fall of the IIIrd Dynasty at Ur (see Figure 5).[33]

XV. The Over-all Deviation from Popular Views Resulting from the Redating of the Hittites

A cursory review of the section headings of this chapter will make it apparent that the over-all change from popular views that results from the redating of the Hyksos to a post-Conquest period in agreement with Biblical history, is the movement of a large unit of the history of antiquity forward on the time scale by a plurality of centuries. This unit includes not only the dynasties of Egypt with numbers below XXIII, but also the placement of the Hittites, the corresponding movement of the First Dynasty at Babylon, the dynasties at Isin and at Larsa, and the line of Assyrian kings in the Khorsabad list preceding the name of Adasi. When this is done, we arrive at a chronology for the related peoples of antiquity as shown in Figure 5. With this movement, there is also necessitated the similar movement of the dynasty at Ur and all the other dynasties of Chaldea preceding the dynasty of Ur, a move that involves the entire problem of the antiquity of Assyria and Chaldea. The manner in which these early Chaldean dynasties are related to each other has never been satisfactorily elucidated, and no attempt will be made to do so here, other than to point out the necessity of assigning a beginning to the dynastic history of Chaldea not significantly different from that derived for Egypt, i.e., at the beginning of Early Bronze correlated with the incident of the Dispersion incident of Scripture, dated c. 2150 B.C.

The primary error that has been made in setting up the traditional chronological structure of the ancient world may thus be traced to the failure of scholars to recognize the misplacement of the Hittites of archaeology in the history of antiquity. It remains true that the Hittite problem entered the field some time later than the setting up of the general outlines of the traditional chronology. However, it seems astonishing that with the increasing number of anachronistic situations that have resulted with, or subsequent to, the entrance of the Hittite problem, that this would not have suggested the desirability of a careful re-examination of the fundamental premises on which the structure had been erected.

The general correctness of the proposed structure pertaining to the territory of Mesopotamia may now be confirmed from a number of directions, several of which will now be introduced. A mere criticism that the final structure may require subsequent modification or that it upsets certain long-held but unproved theories is an insufficient basis for its rejection. It is a structure that is not easily shaken. It is hardly to be expected that an investigation deviating so far from popular views will be without a flaw. We proceed to the review of further material in support of this altered chronological structure.

XVI. The Problem of the Kassite Dynasty

At the very center of the problems relative to the chronology of the peoples of Mesopotamia, is that of the Kassites and their time-relation to their contemporaries. The origin of this people is obscure, and their language does not seem to be of any assistance in the solution of the problem, since it is not related to either the Semitic or the Indo-European group.[34] It has been suggested that the Kassites were of Hittite stock, though such a relation remains speculative. A relation to the Cossaeans has also been entertained, though this does not help either, since the origin of the Cossaeans is equally obscure. In view of what must be considered a relatively sudden appearance of the Kassites in Babylonian territory and in the absence of any evidence of a conquest, it has been proposed that the Kassites did not come into this territory directly from their original home. An intermediate residence in the area of the Persian Gulf has been suggested.

The absence of any inscriptive evidence of a conquest of the territory of Babylonia by the Kassites has led to the further assumption that their presence resulted from a gradual migration into the territory.[35]

> . . . It is indeed unlikely that the conquest of Babylon was achieved by a definitely organized army, led by a commander who proposed making himself a king of Babylon, while still continuing to reign in his own country. It is rather the migration of a strong, fresh people which here confronts us. This people is called the Kasshu. . . .

Since the Kassite kings appear as kings of Babylonia ruling from the site of the city of Babylon, following the fall of the First Dynasty at Babylon, this migration and expansion must be recognized as having occurred during the period of the First Dynasty at Babylon. However, inscriptive evidence that cannot be ignored points to the conquest of Babylon by the *Hittites* as the cause of the demise of this dynasty, and not to a conquest by the Kassites. This leaves the problems of how and why the Kassites took over from the Hittites.

Chronological problems must also be considered. The Babylonian king list gives the Kassite dynasty, with its thirty-six kings, a duration of 576 years. Since the line of Kassite kings appears to exhaust itself in the early reign of Assur-dan (No. 83B, c. 1175 B.C.), the length of time from the end of the First Dynasty at Babylon (currently dated variously between 1600 and 1535 B.C.) to the end of the Kassite regime, does not leave room for any period approaching 576 years. Yet the known names of the Kassite kings approaches closely the stated number of thirty-six. Actually, it has long since been believed that this figure must be rejected by any possible solution to the problem.[36]

> . . . It has become increasingly clear that the Third Dynasty [that of the Kassites] cannot have lasted nearly as long as the 576¾ years attributed to it by King-list A.

However, if it is allowed that the figure was obtained in the same manner as were the dynastic periods of Manetho, i.e., by summation of reigns irrespective of parallelism or overlapping, the figure may well have a basis in fact. According to the Synchronistic Chronicle, there were eight Kassite kings who began their rule within the very brief (6-year) reign of Samsi-Adad.[37] This Samsi-Adad must be the same as king No. 57 in the Khorsabad list, since he is followed by Isme-Dagan and another king by the name of Samsi-Adad. If it is recognized that these eight kings ruled a divided territory contemporaneously and that their *local* rules extended past the point of a united rule by Burnaburiash by normal periods of 15-20 years, this alone could account for the major fraction of this discrepancy. There is further evidence of parallel rules by several of these kings at the end of the dynasty. Reference to Figure 5, shows that the *elapsed time* for the dynasty was about 400 years. Correctly interpreted, this 576 years does not require rejection.

An attempt at a solution to the chronology of this era was presented in 1940.[38] This was shortly *before* the appearance of the report of Poebel on the Khorsabad list.[39] The attempt is of particular interest, not because it settled the problems, or that its views are generally accepted, but rather because

Key to Figure 5

The numbers on the chart refer to the numbers of the kings in the various accompanying tables. The kings of the two Assyrian dynasties and of the First Dynasty at Babylon are given space in proportion to their reported reign lengths. Preference has been given to the data from the eponym list of Hammurabi over the longer reign length given in the king list. The first seven of the Hittite kings, whose reigns are not known, are given an average reign of sixteen years; the time for the subsequent kings being adjusted to meet the synchronism between Telipinus and Tiglath-pileser. The reign lengths of the Kassite kings (which are not known) are adjusted to meet the synchronisms with the Assyrian kings as given in the Synchronous Chronicle, the Synchronous History and the Babylonian King List A.

The slight folding of the Assyrian list is made to meet the synchronisms between Naram-Sin and Samsi-Adad. The two kings before Damqiili in the dynasty at Uruk evidently belong to the pre-famine period, the kings from Damqiili onward being synchronizable with the kings of Assyria as shown. Names not given on the chart are considered as not pertinent to the problems dealt with, or cannot be given dates that have a significant value to these problems. A synchronism was noted many years ago by Rawlinson (R-AM, Vol. II, p. 171) between Gurguna, a king at Larsa, and Samsi-Adad of Assyria. This synchronism was of necessity abandoned with the acceptance of the Khorsabad list as a sequence, but reappears with the revision. His father, Isme-Dagan, is then probably the king at Isin who must have ruled there about the same time.

The kings of early Assyria, including those who ruled from tents and the father-son sequence from Uspia (No. 16E) to Ilu-summa must fit into the period from the second marriage of Abraham to the reign of Ilu-summa who is synchronized with Samuabu, first king of the First Dynasty at Babylon. Some parallelism of rule must be recognized.

The vertical lines represent synchronisms. The new synchronisms by the revised structure are those between the Hittites and Assyria, between the Hittites and Bible chronology, between the famine of Ibbi-Sin with the famine of Joseph and the reappearance of the synchronism between Gurgana and Samsi-Adad. The structure clarifies the time positions related to contemporaneity of kings of this dynasty with the First Dynasty at Babylon. While the dynasty is made to end at the time of Assur-dan by the Babylonian king list, it is clear from the Synchronistic Chronical that Kassite kings continued to reign with some degree of control after this.

the suggested solution reveals so clearly the weaknesses in the popular dating of the XIIth Dynasty of Egypt, the era of the Hittites, and, in view of the weaknesses noted above, the desirability of recognizing that the dynasty of Adasi did not represent the sole rule, or even the primary rule of Assyria. To meet the difficulties rising from evidence in the Cappadocian tablets, a gap in the Assyrian records was hypothesized from the end of the reign of Isme-dagan (No. 40E) to the reign of Assur-nirari (No. 60), who was dated 1555,[10] though the Khorsabad data yields a date 60 years later than this. The Kassite dynasty was given an origin in this gap. Reference to Figure 5 shows that this *latter* deduction was correct, but the assumed gap resulted from a failure to recognize that this is the period of the dynasty of Adasi, for which there is a blank as far as inscriptive evidence is concerned, but it is not a blank in the chronology. This is the period of the contemporary line of kings.

The principal sources of information on the Kassites from a chronological standpoint are (1) the Baylonian king list, (2) the Synchronistic Chronicle, and (3) the Synchronous History document. Data from other sources, of course, cannot be disregarded, even though indirect. The data on the Kassites from these three sources have been synthesized in Table F to yield a near-complete list of the Kassite kings. In this synthesis, popular opinion has been disregarded in favor of the data provided relative to the stated Assyrian contemporaries of these kings. In the remaining cases, it has been possible to deduce with a high degree of probability the identity of the contemporary Assyrian king. These points are specifically noted in the table.

It will be noted from this table that the Babylonian king list gives the names of the first five Kassite kings, at which point there is a lacuna estimated to represent about 15 lines. When the list is resumed, the names of the next five are damaged or partly damaged, though the reign lengths of four of the five are given. The Synchronistic Chronicle gives the names of the first eleven (with a single omission), then follows a lacuna, considered as representing but a single missing line. However, the next name in the list is a contemporary of an Assyrian king who reigned a century and a half later! The Synchronous History document begins with a lacuna, the first king included in the readable por-

TABLE F

A Synthesis of the Kassite Dynasty

Data from the BKLA*	**Data from the SC***	**Data from The SH***	**Assyrian Contemporaries**
Gandash (16)*	Gandush		Erisu (No. 56B)
Agum (12)	Agum I		Samsi-Adad
Kashtiliashi (22)	Kashtiliashu		"
Ushshi (8)	....		"
Abirattash	Abirattash		"
Tazzigurumash. . .	Tazzigurumash		"
	Harbashipak		"
	Tiptakzi		"
	Agum II		"
lacuna of about 15 lines	Burnaburiash	lacuna	Isme-Dagan (No. 58B)
			Samsi-Adad
	Kashtiliashu		Assur-nirari
	Ulamburiash		Puzur-Assur(No. 61B)
	"		Enlil-nasir
	"		Nur-ili
	"		Assur-saduni
			Enlil-nasir
			Assur-nirari
	lacuna	Karindas	Assurbelnisesu
			Assurrimnisesu
		Burnaburiash	Assur-nadin-ahhe
			Eriba-Adad (No. 72B)
		Karamurodas	Assur-uballit
		Nazibugas	"
. . . .(22+) (identity assumed) ---->		Kurigalzu	Enlil-nirari
			Arik-den-ili
. . . .(26) "	lacuna ---->	Nazimurodas	Adad-nirari
. . . .(18)			Shalmaneser (assumed)
Kadash. . .(. . .)			Tukulti-Ninurta "
Kudur. . .(6)			" "
Shagarakti (13)			" "
Kashtiliash(8)	Kashtiliash		" (stated)
Ellilnadinshumi(1.5)	Enlilnadinshumi		Assurnadinapli
Kadashman-Harbe(1.5)	Ka		"
Adadnadinshumi (6)	Adad.		Assur-nirari
"			Enlilkudurusur
"			Ninurta-apil-ekur
Melishipak (15)	M. . ish . pak		"
Mardukaplaiddin(13)	. . . . .aplaiddin		"
Zababa. . . .	Zababa. . .	Samma-sum-iddin	Assur-dan (No. 83B)
Enlilnadin. . .	. . . .nadin. . .		"
576 years 9 months, 36 kings. . . .			

*Babylon king list; Synchronistic Chronicle; Synchronous History. SC and SH give Assyrian contemporaries. Numbers in ( ) in BKLA are reign lengths. Some scholars do not include Gandush as Kassite and regard Agum I as the first king. . . . . indicates omissions or unreadable portions. When the unreadable parts can be assumed with certainty, these are not shown.

tion being a contemporary of Assur-bel-nisesu (No. 69B; 1416-1408 B.C.). The synthesized list accounts for thirty-one of the 36 kings stated to compose the dynasty. Two other names may belong in the list just prior to Karindas of the Synchronous History. The others, when found, should fit satisfactorily into this arrangement, either by insertion or parallelism.

Any final solution to the Kassite problem cannot disregard the evidence that the Kassites were an organized people with armies back as far as the reign of Samsuiluna (7D, successor to Hammurabi) and in the reign of Hammurabi. The ninth year of Samsuiluna is named in his eponym list by reference to the Kassite army.[41] Evidence has been referred to by Rogers indicating an attempted invasion of Babylonia by the Kassites in the reign of Hammurabi.[42] Neither of these situations fits well against the background of popular opinion which places the first Kassite king *after* the fall of the First Dynasty at Babylon.

The assumption that the Kassite name "Karduniash" has been correctly equated with the entire territory of Babylonia is here queried. The earliest reference which suggests that Kassite kings ruled from the *city of Babylon* is that from the reign of Tukulti-(Nin)urta (78B).[43] This Assyrian king (dated 1242-1206 B.C.) battled with the Kassite king, Kashtiliash (see Table F), and the battle involved the destruction of the walls of Babylon and the removal of the Babylonian god (Marduk) from the city. From this time on, the territory of the Kassites is referred to as Karduniash. Luckenbill, in his compendium of the Assyrian inscriptions, places the name Babylonia in parenthesis after each usage of the name. While this may be entirely defensible, the data do not warrant the conclusion as unequivocal *that Kardunish of the previous period* had reference to the same territory as that of all of Babylonia or Chaldea.

The alternate probability is that Kardunish of the earlier references is either *one of several divisions* of the territory of Babylonia, or that it was a separate territory to be distinguished from Babylonia. In the latter possibility, it would be quite possible that the Kassite territory was under the control of Babylonian kings. It was not at all unusual for a dominating country to allow its tributaries to be ruled under their own kings. Hence in either case, there is no valid reason for rejecting the concept that the line of early Kassite kings ruled contemporarily with the kings of the First Dynasty at Babylon. It is also possible that the Kassites during this time were an independent people and that the Babylonian kings tolerated their independent rule, because they served as a buffer between themselves and the Assyrians. Such a situation would explain the fact that the eventual difficulties of the Kassites were with the Assyrians.

That the Kassites were long able to maintain a peaceable co-existence with the Assyrians is indicated by the fact that border disputes were amicably settled as late as the reign of Assur-bel-nisesu (No. 69B; 1416-1408 B.C.).[44] This situation also indicates that, even at this late period, the pressure for room for the population was not great. It was evidently the aspirations of subsequent kings in the direction of controlling an empire that eventually led to wars of conquest. In Babylonia these aspirations matured with Hammurabi; in Assyria it appears still later.

The fact that the Kassites were able to assume control at the site of Babylon, with the fall of the First Dynasty, which had been ruling from that site, suggests that they had been on good terms with the Amorite dynasty, and the transition to the Kassite control may have been no more of a disturbance than that when the princes of the XIIIth Dynasty in Egypt assumed control at the end of Dynasty XII.[45]

The point of importance is that, against the background provided by the revised chronological structure, there is no need to assume that the Kassites did not have kings until after the fall of the Amorite dynasty at Baylon.

XVII. The Background to the Rise of the Several New Dynasties During the Last Half of the Seventeenth Century

The developing situation, in terms of the revised chronology shown in Figure 5, reveals that prior to the mid-seventeenth century, the organized governments in the area of Mesopotamia were limited to the IIIrd Dynasty at Ur (in Chaldea), the beginnings of the dynasty at Uruk (in Chaldea), and the beginnings of the Assyrian kings from a line just emerging from a government conducted from tents of nomadic tribes. In the year 1648, a second line of Assyrian rulers follows from the attempts at organization by a series of "nobodies" with no royal ancestry. The IIIrd Dynasty at Ur comes to what must have been a near-coincident end, followed, within perhaps a decade, by the rise of the dynasties at Isin and Larsa in Chaldea, and shortly thereafter by the Amorite dynasty (First Dynasty at Babylon) and by the

Kassite dynasty. These latter peoples must have begun their migrations into this area a significant period of time prior to the organization of governments with kings over them, since in neither case is there any evidence of a necessary conquest from an earlier people.

Since the territory of Chaldea had a known occupation prior to these migrations reaching back to the earliest known settlements of man,[46] it would seem that sufficient time had elapsed to provide a vast population in this area. Yet the Amorites and the Kassites seem to be moving into an almost empty territory. The suggestion is that some event occurred shortly before this which resulted in the decimation of a large fraction of the previous population.

When the era in question is set against the background of the situation in Egypt and in Palestine by this same chronology, an explanation for this unexpected state of affairs is provided. The Exodus of the Israelites from Egypt occurred in the year 1445 B.C. The Israelites had come into Egypt from Palestine two hundred fifteen years before this under conditions of a severe famine — a famine so severe that after two years it was necessary for Jacob to send his sons into Egypt to secure substenance. Egypt had been spared the worst effects of the famine by the previous preparation under Joseph. The preparations involved the utmost use of every bit of cultivatable land with the storage of the excess of the production during "seven years of plenty." As part of this conservation program, a canal was dug parallel to the Nile, the remnants of which are still recognized as having had the potential of doubling the productions of crops in Egypt. To this day that canal is known as the "Canal of Joseph," and its construction is ascribed by the populace to the patriarch Joseph.[47]

It may be deduced that at the end of the seven years of disastrous famine, most of the population of Palestine had either died of starvation or had migrated to areas much farther north. Since the effects of the famine were such as to extend from the head-waters of the Jordan to the head-waters of the Nile, some 3,000 miles farther south, it can only be concluded that the effects of this famine disaster extended also into the area of Mesopotamia. This famine ended in the year 1655 B.C. The date, by the Khorsabad list, for Adasi is 1648. He was preceded by a series of "nobodies" who had evidently made unsuccessful attempts at the reorganization of the country. The Amorites and the Kassites, organized governments within about a century. The migrations of the Amorites and the Kassites into this territory must have begun in this same period of recuperation from the effects of the famine disaster.

If, then, there is inscriptive evidence of a famine about this time in the Euphrates valley, the picture comes into clear focus. Such a famine record comes from the reign of Ibbi-Sin, last king of the IIIrd Dynasty at Ur.[48] Whether the government represented by the dynasty at Ur survived the disaster, as did the dynasty at Uruk, only to be taken over in its weakened state by the Elamites, or whether the government was totally disintegrated by the disaster is beside the point. The chronology of Mesopotamia confirms the correctness of Bible chronology relative to the famine in the time of Joseph, and confirms the proper placement of the Hittites in the post-Conquest era.

XVIII. The Kassite Names in the Amarna Letters

Perhaps the strongest adhesive that has been used to hold the popular chronological structure together is the reference in the Amarna Letters to certain Kassite and Assyrian kings. This series of documents has been introduced in a previous volume,[49] where it was promised to return to this topic after the problem of Assyrian and Chaldean chronologies had been considered.

These letters represent the correspondence of various foreign kings and persons of official prominence with Egyptian kings. The recipients of many of the letters were the kings of Egypt whose names are currently identified as Amenhotep III and Amenhotep IV (Akhnaton) of Dynasty XVIII. While other kings of Egypt had throne names the same or very similar to these,[50] certain details in the letters appear to substantiate these identifications, in spite of the difficulties involved in the transliteration of cuneiform names into Egyptian.[50a]

The throne name of Amenhotep III, which we render as Neb-maat-ra, was variously vocalized by the cuneiform scribes as Nimmuria, Nammuria, Nimutriya, or Mimmuria; these variations show how little exactness can be expected in cuneiform versions of names.

Most of the letters, however, are addressed only "To the King." It has been assumed that Amenhotep III and Amenhotep IV were nevertheless the recipients of these letters also, an assumption that is not so clearly demonstrated in the content of the letters. The impersonal address suggests that some of these letters belong in the obscure period after the death of Amenhotep IV, during which time even the ancient contemporaries seem to have been confused as to just who was responsible for the rule of Egypt.[51]

The more prominent of the names in the letters that have served as the basis for dating them in the 14th century B.C. are the Kassite names Burraburiash (Burnaburiash) and Kuri-galzu, and the Assyrian name Assur-uballit. The Kassite names are assumed to belong to the kings of the same names as those of the Kassite dynasty (Table F), and the name Assur-uballit is assumed to be that of the Assyrian king of this name in the 14th century (No. 73B).

These identifications are vital as major supports for the traditional structure of the chronology of the ancient world. It is no great exaggeration to state that the total chronological structure deduced from the popular interpretations of archaeology rests heavily, either directly or indirectly, on the assumed identifications of these names and on the assumed identification of Shishak of Scripture with Sheshonk I of Dynasty XXII. Elimination of these proposed identifications would leave this chronology hanging by an exceedingly fragile thread of evidence.

But conversely it is vital to the altered structure defended in this work to recognize that *these identifications do not rest on solid evidence*. It may be stated categorically that the altered chronological structure here proposed stands or falls with the nonvalidity or validity of these assumptions of identification. The fallacy in the proposed identification of Shishak of Scripture with Sheshonk I has been treated in detail in previous sections of this work.[52] It is of interest to note that even though these letters are interpreted quite differently by proponents of the XVIIIth Dynasty setting of the Exodus than by the proponents of the XIXth Dynasty setting, both groups hold to the view that the letters support their particular view. By the XVIIIth Dynasty theory, these letters belong to the post-Exodus period and are interpreted to present a Canaanite view of the Conquest. By the

XIXth Dynasty theory, these letters belong to the pre-Exodus period by about a century, and are interpreted in a manner which rejects the concept that the letters picture an invasion of any kind.

By the altered chronological structure here proposed, these letters do not belong to either period. They belong to the era of the mid-9th century. The Assyrian background is that in the reign of Shalmaneser III (No. 102A); the background in Biblical history is in the era of Ahab and later. This is the placement defended by Velikovsky.[53] While some of his detailed interpretations remain to be confirmed, the general placement is correct, except possibly for a failure to recognize that some of these letters may extend into a period later than the reign of Amenhotep IV.

Our first task is to point out the insecure basis on which rest the popular identifications of Assur-uballit with the king of this name in the 14th century, and of the Kassite names in the letters with Kassite kings of the same era. As for Assur-uballit, his stated genealogy in the letters does not agree with the genealogy of the 14th century Assyrian king by this name. This discrepancy has long since been recognized and succinctly stated by Luckenbill.[54]

> Assur-uballit (ca. 1380 B.C.) of Assyria has long been known from the Synchronous History. . . as the father of Muballitat-Sheru, wife of the Kassite king Burna-buriash and mother of Karahardash (Karaindash). . . . In the second of the two letters Assur-uballit wrote to Amenhophis IV of Egypt. . . . he refers to "the time when Assur-nadin-ahe, his father, wrote to Egypt." The word "father" may here have the meaning "ancestor," as often in the Assyrian texts, but even so our difficulties are not all cleared up. In the texts given below, Assur-uballit does not include Assur-nadin-ahe among his ancestors, although he carries his line back six generations.

With the placement of these letters in the reign of Shalmaneser III, we would identify this Assur-uballit as the prince son of Shalmaneser III, who evidently died before his father, thus never becoming a primary ruler in Assyria, but who could, nevertheless, refer to himself as a king of Assyria within the ethics of that day. The evidence for this deduction is to be found in the eponym list of Shalmaneser III.[55] Usually the first year of the king's reign was named after himself in the eponym list. But in this case, the first name is rendered Sharru-baltu-nishe, a name that has all the earmarks of being the equivalent of Assur-uballit. Since the name *precedes* that of the king, the best possible explanation is the recognition of this person as the king's son and heir apparent to the throne.

As for the Kassite names in the letters, there is little question but that the names are the same as those of Burna-buriash and Kuri-galzu, Kassite kings of the 14th century. But it does not necessarily follow that they are the same *persons* or even refer to persons of that era. The insecurity of attempting to provide dates on the basis of names has been previously noted.[56] A special caution is pertinent against regarding such identifications on the basis of names when such identifications lead to anachronistic situations. Names do not necessarily belong to a given era in any absolute sense. This is clearly the case here, since Kassite names continue to appear in the Assyrian inscriptions to the time of Shalmaneser III and later, with evidence that Kassites continued to hold positions of governmental responsibility.[57]

While it is not possible to put our finger on these particular names in the inscriptions of Shalmaneser III, the continued appearance of Kassite names in the inscriptions does not permit an identification of these names *per se* with Kassite kings in the 14th century. Tiglathpileser III mentions a city by the name of Kurigalzu[58] indicating the then current use of the name. On the other hand, there is evidence that such identification is a mistake. Kuri-galzu of the letters is the father of Burraburiash.[58a] Yet in the Kassite list, the king by this name ruled *after* Burraburiash — and not immediately after, but sixty years after.[59] To avoid the implication of this anachronism, it has been supposed that there were two Kassite kings by this name. Possibly so, but this is arguing from what we do not know, and the assumption stands on no more solid ground than that which places this Kuri-galzu in the time of Shalmanezer III. While Burraburiash of the 14th century married the daughter of Assur-uballit,[60] his reign *preceded* that of Assur-uballit.[61] There is also a chronological difficulty in the daughter of Akhnaton being the wife of the son of Burnaburiash. Akhnaton, (Amenhotep IV) had no daughters of marriageable age at that time.[62]

The anomalies resulting from the placement of these letters in the era of the Conquest have been repeatedly pointed out.[63] The letters do not picture an invasion. The political difficulties described resulted from the rebellious actions on the part of certain of the local governors of the area under pressure from peoples farther north, evidently to be identified with the Hittites. While such a situation is anomalous in the 9th century by popular views, it is not anomalous when the Hittites are given their proper position in the post-Conquest period.

Except for a few questionable interpretations, the area involved is to the north of Palestine — an area never occupied by the Israelites, or at best, the difficulties extend only into the very northern part of Palestine. A satisfactory basis for this involvement in northern Palestine is pictured in Scripture as existing in the mid-9th century.[64]

> In those days [in the reign of Jehu, 841-814 B.C.] the Lord began to cut Israel short; and Hazael smote them in all the coasts of Israel.

Against this background, the difficulties resulted from the incursions of the Hittites from the north into the territory of the city states of Syria and Phoenicia. As the territory ruled by a local governor was taken or threatened, he in turn attempted to meet the situation by trying to take territory from another. The eventual squeeze resulted in incursions into Israelite territory, a situation indicated by the statement above from Scripture.

There remains the problem relative to the assumed extension of the difficulties into the area of southern Palestine and particularly those related to the cities of the Philistines. The vagueness and paucity of information provided by the letters may not yield a total or unequivocal solution to this problem. However, a few observations may be made.

In order to maintain what appears to be a logical sequence of the letters in terms of the developments described, it has been supposed that certain of the persons mentioned in the letters moved from the northern area of trouble to southern Palestine to participate in the difficulties there, only to return to the northern area later.[65] This should be recognized as a very awkward interpretation, particularly in view of the fact that there are no unequivocal evidences of difficulty in the area in between. The identification of a site mentioned in the letters as Shechem remains highly questionable.[66] A more rational view would recognize the possibility that these sites supposed to be in southern Palestine are also being misidentified. In view of the large difficulties of transliterating cuneiform names into English equivalents, how can we be certain that there were not cities in this northern area to which these names could apply equally well or better. There were undoubtedly hundreds if not thousands of sites in this northern area whose names are not recorded in any extant inscription. How can we be certain that these names are being properly identified with sites in southern Palestine.

Perhaps the name on which the greatest dependence is placed is that transliterated as Urusalim or Burusalim and identified with Jerusalem. But even in this case, how can we be sure that there was no city in this northern area with a name that could be thus transliterated? There *is* a reference to a site in this general area translitered as Ulisum,[67] which transliteration is not further away from Urusalim than are many of the other proposed identifications.

Any relation between the difficulties in the area of the Philistine cities with those to the north of Palestine remains speculative. A possible contemporaneity is possible but not unequivocal. The cessation of these letters with the death of Akhnaton appears to rest on the assumption that the city of Akhetaton was destroyed on the death of Akhnaton. If this could be proved, it would suggest that since the letters were found in the ruins of the city, they must belong to the era preceding the destruction. But this has not been proved. A continued occupation of the site for a period approaching a century after Akhnaton is not out of the question.[67a] Why should a city so recently built be destroyed simply because Akhnaton had died. When the city was built, Akhnaton was followed there by some 80,000 residents of Thebes[68] and undoubtedly by many others from other localities. Must we believe that with the death of Akhnaton these 80,000 deserted the city and moved back to Thebes? The closing of the Amarna period and of the Amarna correspondence with the death of Akhnaton is an unwarranted assumption. The possibility that such difficulties as may be clearly demonstrated to belong to southern Palestine may belong to a significantly later period has not been eliminated.

XIX. Confirmation of the Late Dates for the Amarna Letters from Phoenician Chronology

Further confirmation for the dating of the Amarna Letters in the mid-9th century rather than in the 14th, and of their continuation significantly later than the death of Amenhotep IV, is to be seen in the chronology of the kings of Phoenicia as provided by Josephus.[69] Josephus is citing the ancient works of Dius (*History of the Phoenicians*) and of Meander, who is stated to have given the principal acts of each of the Tyrian (Phoenician) kings. According to the data provided from these sources, the building of Carthage occurred in the 7th year of Pygmalion, and the construction of the temple, begun in the 4th year of Solomon according to Scripture, was coincident with the 12th year of Hiram, king of Phoenicia. We are thus provided with an exact synchronism between Phoenician and Biblical chronology. It is further stated that it was 143 years from the 12th year of Hiram to the 7th year of Pygmalion. The names of the intervening kings are given with their reign lengths as follows: Hiram, 34 years; Baleazarus, 7 years; Abdastartus, 9 years; 4 usurper kings as sons of the nurse of Abdastartus, the eldest of whom reigned 12 years; Astartus, 12 years; Aserymus, 9 years; Pheles (usurper), 8 months; Ithobalus, 32 years; Badezorus, 6 years; Matgenus, 9 years; Pygmalion, 47 years.

The correctness of these figures is confirmed by the appearance of the name Ithobalus in the list at a proper date to meet the synchronism of Scripture which states that Ahab married the daughter of this Ithobalus (Ethbaal).[70] By the now fixed date for the 4th year of Solomon by Thiele at 967-966 B.C., it may be calculated that the reign of Pygmalion began in 831 B.C. with the founding of Carthage, dated 824 B.C. This incident resulted from the flight of Pygmalion's sister, Dido. This sister was still alive when Aeneas of the immediate post-Trojan war era visited Carthage after the war.[71] This latter synchronism stands to refute the popular view which places the Trojan war in the 12th or 13th century B.C.

Calculating backward from the dates for Pygmalion, Ithobalus reigned from 878-853. These dates agree with those for Ahab by Thiele's chronology (874-853) and particularly so, since Ithobalus must have been ruling at the time of this marriage, which in turn must have been early in the reign of Ahab.

With the Amarna period moved forward on the time scale by the revision so that the reign of Amenhotep IV of the Amarna Letters falls in the era c. 857-840 B.C.,[72] the letters addressed to this king fall in the period *prior* to the reign of Pygmalion. Since most of the letters are addressed only "To the King," who is not named, and since the letters so addressed belong to the period of trouble, it is deduced that these letters belong *after* the death of Amenhotep and during the reign of Pygmalion, or possibly in the reign of Matgenus, his predecessor.

This deduction is provided a degree of confirmation from several directions. In Letter No. CLXX (of Petrie)[73] addressed "To the King", it is stated that the people of Dunip had been appealing to Egypt for help for 20 years. Since the trouble may well have started even before this, it may have spanned a period of 25 years after the death of Amenhotep IV, reaching to as late as 815 B.C. Letters numbered CLXXVIII and CLXXXIII are from the king of Tyre (Phoenicia). Petrie gives these letters under the subheading, *Abimilki of Tyre in Trouble*. If we are correct in our deductions, then Abimilki is the same person as Pygmalion. An examination of the two names reveals that both have the same consonant sequence BML or the equivalent PML. This is hardly a mere coincidence in view of the independent basis on which the deduction was made. The equivalence is as close as many of the other deduced equivalences for names in the letters. [73a]

XX. The Habiru-Hebrew Problem

The Amarna Letters[74] refer repeatedly to a people known by a name variously transliterated as 'Apiru, Habiru, Khapiru, or Khabiru. Since the letters suggest a prolonged political disruption, and since the letters must be assigned to the 14th century by popular views on chronology, it could be expected that a first hypothesis would equate this people with the invading Hebrews under Joshua. A more careful scrutiny of these letters has, however, convinced most scholars that the difficulties described are of local origin and do not picture an invasion. The picture is rather that of a group of mercenaries, who have joined with certain rebellious local groups, selling or volunteering their services to various local governors who seem to be attempting to extend their territory of occupation at the expense of their neighbors. The movement seems to be under the pressure of incursions into this territory by a people from the north who appear to be the Hittites.

The letters to the Egyptian king are in the nature of pleas by certain of the local governors for aid in the form of supplies, food, and military help—pleas that fell on "deaf ears" with no forthcoming assistance. Each writer emphasizes his own loyalty as a subject of the Egyptian king and charges his opponents with disloyalty. The incongruities which rise from this initial identification of the 'Apiru with the Hebrews are now so many and so great that this equivalence is now virtually universally rejected, or at least so severely qualified as to make unthinkable any connection between the disturbances pictured in the letters and the Hebrew invasion. A number of statements to this effect by various scholars are reproduced below. [75-78]

> The Khabiru of the Tell el-Amarna correspondence, who act in cooperation with the rebels against the Pharaoh's authority, used to be regularly identified with the Hebrews and adduced as proof that the Israelite conquest of Palestine took place in the 14th or even in the 15th century. Particularly since the first World War, however, evidence has accumulated to the effect that the word in question (1) is rather to be read *Khapiru*, (2) was in use all over the Orient in the second millennium B.C., and (3) designated men of any and every nationality. . . . But the severest blow of all was dealt to the identification of the *Khabiru* with the *Hebrews* by the discovery at Ugarit of partly parallel Accadian and Ugaritic lists of towns of the kingdom of Ugarit. For the town which is called "Khalb of the Khapiru" in Accadian is called "Khalb of the *'apirim*" (not *'ibriyyim* [= "Hebrews"] or the like) in Ugaritic.
>
> . . . Unlike the Hurri, the Habiru, in the opinion of most scholars, cannot be reconized as an ethnic group, since no characteristic names can be associated with them. Nor can they be recognized as following some definite occupation, for sometimes they are apparently professional soldiers, sometimes they are labourers, and sometimes slaves. The only common characteristic is that they are foreigners. . . .
>
> In the first place, it is clear that in the Amarna age we have small groups of people acting simultaneously in different parts of the country, and not the united army that the book of Joshua brings before us. . . . Some of the letters plead for a garrison of fifty to be sent for their protection. This would scarcely suffice for defence against a force

> of more that half a million men of military age, and by whatever specious devices the Biblical numbers are reduced to what might seem more manageable proportions, they could not be brought down to anything against which a force of 50 men would appear adequte. . . . Even if the Biblical numbers are dismissed as wholly unreal, and it is recognized that the company that came out of Egypt was only a small one, it is still impossible to relate the Biblical picture of a united group acting under a single leader with the pattern of the Amarna correspondence.
>
> . . . A number of the letters complain about the trouble from a people called Hapiru. . . a word connected in some way with "Hebrew". . . . Many scholars in the past have interpreted these letters to mean that a great invasion from the desert was taking place, an invasion to be connected in some way with the Hebrew conquest of Palestine. . . . Recent students of the letters, however, claim that there is within them no evidence whatever of an invasion. The 'Apiru are considered in the letters as "bandits" or lawless gangs, a number of them, at least, ill-paid mercenaries who were joined by an increasing number of the people from the oppressed population. In addition, the term is applied by local kings to neighboring kings and their armies who are siezing land and towns. The king of Byblos, for example. . . assumes that anyone who takes his land is an enemy of the Pharaoh. . . . It is impossible therefore, to see any evidence of a great invasion or to connect the disturbances with the Israelite entry into Palestine, because the 'Apiru were already within the land and were not new invaders. The letters nowhere contain reference to an invasion; the attackers labelled 'Apiru were the people of other city-states.

XXI. The Problem of the Antiquity of Assyria

Based on a sequence interpretation of the Khorsabad king list, Poebel entertained the possiblity that the Assyrian history began in the remote past, though less ancient than the dynastic era for Egypt and Chaldea.[79]

He also recognized as a reasonable possibility that the early names in the list did not necessarily represent a sequence. The first seventeen of these kings are stated to have ruled from tents,[80] indicating a time when the area was more or less nomadic.

Scripture suggests[81] that Assyria derived its name from that of Asshur, who is stated to have migrated from Chaldea into the territory of Assyria. While Scripture is not clear in stating when this migration occurred, the statement makes sense with the context when it is assumed that this was at a notably later time than the era of Nimrod, the beginning of whose kingdom was "Babel, and Erech, and Accad, and Calneh in the land of Shinar." It has been suggested on this basis that this Asshur may have been the progenitor of the Asshurim mentioned in the genealogy of Abraham by his second wife Keturah.[82] Poebel entertained such a possibility.[83] Tentatively granting such an origin, it could be expected that some of the names of the descendants of Abraham would appear in this list of seventeen kings who ruled from tents.

By comparison of the early names in the Khorsabad list (Table G) with those in the genealogy of Abraham, (Table E) we find a number of very reasonable name equivalents. There is the name Asarah (No. 15), which could be the equivalent of Asshur; there is the name Uspia (No. 16), which could be the son of Abraham given as Ishbak; there is the name Zuaba (No. 11), which could be Sheba, the grandson of Abraham; there is the name Didanu (No. 9), who could be Dedan, the grandson of Abraham, and by an equation less apparent than the preceding, but still possible, there is the name Adamu (No. 2) which could be Medan, son of Abraham, and of Mandaru (No. 6),), who could be Midian, the son of Abraham.

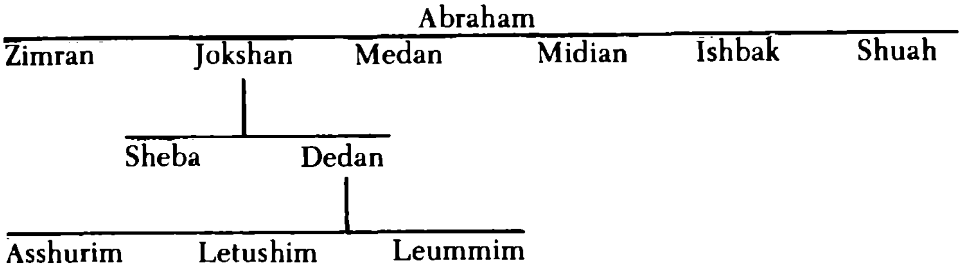
It is possible to check the feasibility of such an origin of these early kings of the Khorsabad list in terms of the chronological data provided in Scripture. The Exodus occurred in the year 1445 B.C.[84] Abraham entered Canaan from Chaldea 430 years before this,[85] in the year 1875. At that time he was 75 years old,[86] and his wife Sarai was ten years his junior.[87] Sarai died at the age of 127.[88] This was then sixty-two years after the entrance into Canaan or in the year 1813 B.C. Allowing 3 years for remarriage of Abraham and the birth of Jokshan, this son was born in 1810 B.C. Allowing 90 years for a great grandson to reach maturity (22 years estimated), the migration of Asshurim into Assyria was c. 1720 B.C.

The name Uspia (No. 16) begins a line of rulers in father-son sequence which continues for eleven generations. Since Ushbak, here identified with Uspia, was the son of Abraham, we must suppose that Asshur migrated into this territory with his ancestors of mature age back to the sons of Abraham. Uspia, as a son of Abraham, was then about 66 years old at the time of this migration. Aspiasal (No. 17), said to be the son of Uspia, and Halu, his son, represent these two generations. We thus have nine additional generations to recognize. Allowing these 200 years, we are taken to a date c. 1520 B.C. for the end of this line.

Since there is a break in the line at this point, (see Table G) we may suppose that the further kings to Ilusumma of the synchronism with the First Dynasty at Babylon were contemporary with this line through the lineage of Abraham. A date for Ilusumma c. 1520 is not at all improbable by the arrangement of Figure 5 based on these premises. A recognition of an origin of these early rulers of Assyria in the immediate descendants of Abraham is thus feasible within the limits of a strict interpretation of Bible chronology, though this has not been proved. The major weight of evidence is found in the appearance of these several names in the Khorsabad list which can be reasonably equated with the names provided in Scripture for the genealogy of Abraham.

TABLE G

The Descendants of Abraham



Notes and References

(1) See quots. of refs. 14-16 of Chap. VII. (2) Gen. 25:1-3. (3) Vol. I, Chap. V, Sect. VI. (4) *Ibid.*, quot. of ref. 43. (5) *Ibid.*, Sect. XII. (5a) Chap. XIII of this volume. (6) Vol. I, Chap. XVI, Sect. VI; this volume, Chap. V, Sect. X. (7) Vol. 1, Chap. XVIII, Sect. VII. (8) Cited in B-BE, Vol. IX, p. 155; see also JNES, Vol. I (1942), opposite p. 289 for attempts to fit others of these time periods into the current views. (9) See refs. 8. (10) See Sect. XX of this chapter. (11) See ref. 10. (11a) See quots. of refs. 75-78. (12) See Vol. I, Chap. XVII, Sect. XI, Sect. XI for example of difficulty rising from assumption that these time periods represent elapsed time. (13) Reproduced in L-ARAB, Vol. II, p. 439. (14) Vol. I, Chap. IX, Sect. IV. (15) Vol. 1, Chap. VI, Sect. X. (16) C-SH, pp. 257ff. gives this chronology with synchronisms. (17) *Ibid.*; Vol. I, Chap. V, Sect. VI; this volume, Chap. V, Sect. XII. (18) L-ARAB, Vol. I, pars. 292, 306. (19) G-H, p. 25. (20) P-ANET, p. 277. (21) Sects. XIV-XVI. (22) See ref. 16. G-H, p. 23. (23) See Table E for the names of 40 of these kings. The other six are said to have been "sons of nobodies." (24) P-ANET, p. 272f.; the data in Table F, column designated SC, are from this document. (25) *Ibid.*, p. 267; BA, Vol. XI, p. 10. (26) JNES, Vol. II, pp. 85ff. (27) *Ibid.*, p. 470. (28) These assumed prolonged blanks can be regarded as suspect, since it is a well-established fact that when a territory becomes so defenseless as to have no history, another people will move in to fill the gap. (29) JNES, Vol. I, p. 285. (30) Sect. XXI. (30a) See ref. 24. (31) P-ANET, p. 267 citing the Sargon Chronicle. (32) *Ibid.* (33) R-HBA, p. 61. (34) *Ibid.*, pp. 99ff. (35) *Ibid.*, p. 99. (36) BASOR, No. 77, p. 28. (37) These are the kings from Agum I to

Agum II inclusive as given in Table F under the column designated SC, which list must also include the omitted Ushshi of the Babylonian king list. (38) By Albright, BASOR, No. 77, pp. 20-30. (39) The report on the Khorsabad list appeared in 1942. (40) See ref. 38, Table p. 29. (41) P-ANET, p. 271. (42) R-HBA, Vol. I, p. 93. (43) L-ARAB, Vol. I, pars. 140, 141, 145. (44) S-RP, Vol. IV, p. 27 (citing the Synchronous History document). (45) Vol. I, Chap. X, Sect. III. (46) This volume, Chap. VIII, Sect. V. (47) Vol. I, Chap. X, Sect. V. (48) See discussion under subheading "Third Dynasty at Ur" in Babylonia and Assyria," *Encyc. Brit.* (1959 ed.). (49) Vol. I, Chap. III, Sect. III, par. 10. (50) For examples; Rameses VI had the name Maat-Neb-Re, quite identical to that of Amenhotep III, and Rameses X has the name Nefer-ka-re, from which such a name as Naphkuri could have been derived (P-HE, Vol. III, pp. 172, 178). (50a) P-HE, Vol. II, p. 268. (51) As indicated by the omission of the names for Amenhotep IV and his successors following Amenhotep III. (52) Vol. I, Chap. XVI, Sects. VI, VII; Chap. XVIII, Sect. VII. (53) V-AC, Chap. VI, (54) L-ARAB, Vol. I, par. 58. (55) *Ibid.*, Vol. II, p. 431 (par. 1198). (56) Chap. II, Sect. VI. (57) L-ARAB, Vol. I, pars. 565, 649; Vol. II, pars. 97, 98, 102 etc. (58) *Ibid.*, Vol. I, par. 764. (58a) Letter XX (P-HE, Vol. II, p. 276). (59) See Table F. (60) S-RP, Vol. IV, p. 27, citing the Synchronous History document; see quot. of ref. 54. (61) Since, according to the Synchronous History, he began to reign when Assur-nadin-ahe was king of Assyria (see Table F). This king preceded Eriba-Adad on the chart of Fig. 5. (62) P-HE, Vol. II, p. 275. (63) See quots. of refs. 75-78. (64) II Kings 10:32. (65) P-HE, Vol. II, p. 308. (66) See Chap. IX, Sect. VI. (67) P-ANET, p. 268. (67a) Budge allowed a period somewhat short of a century (B-N, p. 557). (68) W-SHAE, p. 149. (69) J-AA, Bk. I, pars. 17, 18. (70) I Kings 16:31. (71) Chap. XVI, Sect. VII. (72) Vol. I, Fig. 11. (73) P-HE, Vol. II, pp. 292f. (73a) For example, deriving Jeroboam from JBM. (74) Many of these letters are reproduced by Petrie with introductory remarks (*Ibid.*, pp. 259ff.). See also B-AB, pp. 402ff. (75) BA, Vol. VIII, p. 48. (76) K-AHL, p. 183. (77) R-FJJ, p. 41f. (78) W-BA, p. 75. (79) JNES, Vol. 1, pp. 255f. (80) *Ibid.*, p. 252. (81) Gen. 10:11. (82) See ref. 2. (83) See ref. 79. (84) Based on the 480 years of I Kings 6:1 and Thiele's date for the 4th year of Solomon. (85) Gal. 3:16, 17. (86) Gen. 12:4. (87) Gen. 17:17. (88) Gen. 23:1.

CHAPTER XVIII

ON THE COMPARATIVE EVALUATION OF TWO PROPOSED CHRONOLOGICAL STRUCTURES

The fundamental problem with which we are dealing in this work is one of a comparative evaluation of a proposed gross chronological revision with traditional concepts of long-standing. If a valid comparison of evaluation could be made on the basis of majority opinion, the scales would be rapidly and emphatically tipped in favor of current opinion. However, history has demonstrated clearly that such a criterion does not represent a valid basis for evaluation of opposing concepts, and neither does error become truth simply because it has been so regarded for an extended period of time. Except as valid criteria are recognized for making such a comparative evaluation, there is little hope of arriving at a conclusion that is scientifically sound.

The problems of archaeology differ from those of the more exact sciences in that the starting data, more often than otherwise, are not susceptible to anything resembling an unequivocal interpretation chronologically. If a more completely documented history of the ancient peoples were available as a basis for interpretation of archaeological finds, the problems might well be largely confined to refinement of certain dates falling between two well-established and not widely separated dates. The known history of the major nations of antiquity from the 9th century B.C. and onward is not at all complete; nevertheless, sufficient data are available to establish certain areas of chronology in an unequivocal manner. Such is the case in correlating the chronologies of Assyria and Egypt with that of Palestine for the late Israelite era. Or if even a single precise and unequivocal method of dating archaeological finds were at our disposal, such a chronology might be established to the point where remaining questions had to do only with minor details. Certainly such a reliable method would provide a basis for quickly deciding between the proposed revision and the traditional structure. For the period prior to the 8th century B.C., no such dating method has been devised,[1] and the unreliability of the methods that have been used is becoming more and more apparent.

Even if the inscriptional material for this earlier era contained a few more critical and unequivocal synchronisms between the kings of different nations, a decision between the two views would be readily apparent. Such a series of synchronisms is extant between Chaldea and Assyria to tie the two histories together in rigid fashion for the period covered. However, even here the correlation is relative and not absolute. Unfortunately, the mention of foreign kings by clearly identifiable names in the local inscriptions for this earlier era is meager indeed. A few such are extant between Egypt and the Hittites to tie the chronologies of these two peoples together at the time of Rameses II, but this does not provide dates on the B.C. time scale for the chronology of either area. The same is true of the rare reference usable as synchronism between Hittite and Chaldean history.

Or, if we had a more certain basis for knowing the extent to which the figures assigned to the reigns of ancient kings represent true elapsed time, without inclusion of coregencies and parallel reigns, this would be a very significant factor in clarifying the problems of ancient chronology. Of similar help would be the various time periods between kings or incidents mentioned in the ancient inscriptions, if these could be depended upon to represent elapsed time. So many of these figures are becoming increasingly apparent as not representing elapsed time that their use has introduced more by way of confusion than clarification.

While Scripture refers to incidents in the earlier history of Egypt, it is not until very late in Israelite history that the pharaohs mentioned are identified by name. This has left the problem of identifying these unnamed kings as best can be done on the basis of the more obscure evidences of archaeology. An element that has introduced much difficulty is the fact that often the foreign kings were known in other lands by names that bear little or no resemblance to their Egyptian names.

There seems to be little hope that these situations will be altered significantly at any time in the near future. The only course open is that of deciding on the most valid criteria that can be used under the circumstances for a comparative evaluation of the merits of the opposition views. The following suggestions are proposed as guidelines in such a relative evaluation.

1. All but a very small fraction of archaeological observations could be satisfactorily fitted into more than a single chronological structure. More specifically, the vast majority of these data could be fitted with a degree of reason into either the traditional or revised structure. Without attempting to define this fraction of archaeological observations, it may be stated as a principle that data which may be fitted equally well into two opposing views has no value in substantiating either view over the other.
2. It is rather the extent of the data that fit into one structure but not the other, or which fit distinctly better into one structure as compared to the other, that should serve in such comparative evaluation. Of two proposed schemes, that which is in notably lesser difficulty with the more readily interpretable inscriptive evidence and with those few archaeological observations not susceptible to ready agreement with both schemes more closely approaches the truth.
3. If a chronological scheme rests much of its weight on unproven premises and is in repeated difficulty with the inscriptional evidence or with archaeological observations susceptible to unequivocal interpretation, this structure cannot be rationally considered as more than hypothetical. In no sense of the word is it to be regarded as fixed beyond the necessity of major revision. On the other hand, the multiplication of such difficulties should provide the clue that major alterations will continue to be required if the scheme is to merit any semblance of credibility. In the list of unproven premises are those which assume a reliability for the C-14 and Sothic dating methods.

The traditional chronological structure rests very heavily on a series of such unproven premises and is in just such difficulty with the more readily interpretable data as has been pointed out in this work. Not the least of these is the tacit premise that Manetho's dynasties must be held to represent a numerical sequence, except for the deviations now recognized. While no one is going to contend for a permiscuous arrangement of these dynasties, room should be left for serious consideration of proposals which recognize breaks in this sequence at points where unequivocal proof of a sequence is lacking.

4. While rules without exception are the exception, nevertheless a chronological structure based on archaeological interpretations which require frequent and critical deviations from the rules of interpretation of archaeological observations should be regarded as suspect. The more frequently such deviations are required, the less confidence is to be placed in the structure.

5. Perhaps the most flagrant deviations from the rules required to maintain a credence in the traditional scheme are (1) the use of scarabs and tomb objects as a basis for dating critical areas in the structure which do not have satisfactory support otherwise[2] and (2) the disregard of the absence of the expected cultural change at the conquest and occupation of Palestine by the Israelites.[3] Such evidence might well be missing in the case of conquest without occupation, or from a minor infiltration, but it is incredible that we be asked to believe that the Israelites took possession, with occupation, of the numerous cities and villages of the area when in no case has any significant evidence for a change in culture been observed at the levels attributed to the Conquest.

6. A correct chronology should yield a consistent historical picture of the interrelations between all the peoples involved. A proposed synchronism between only two peoples when three are inseparably involved, leaving an anachronistic situation with the third, is not a true synchronism; it is an anachronism. While the absence of complete information may leave blank spaces in the picture, this is quite a different matter than inconsistency. In the writer's opinion, the concepts of a Hyksos empire,[4] of a Libyan origin of Dynasty XXII,[5] and the proposed identification of Sheshonk I with Shishak of Scripture should be recognized as wholly incongruous and inconsistent with the facts. A similar evaluation should be recognized for the entire approach used in attempts to correlate Scripture with archaeology on the basis of trivia and situations that have no unique qualities, while neglecting the details of a more unique nature.[6]

7. The necessity for recognizing extended gaps in the history of an area should serve as a clue for suspecting that the chronology has been unduly expanded. If such extended gaps appear at several widely separated areas, the

probability of such undue expansion is magnified to the point of requiring a critical re-examination of the validity of the premises on which the structure has been erected. The extended gap of many centuries in the histories of Greece[7] and of the Hittites,[8] as well as at numerous individual sites in Palestine and elsewhere, is an example of the point in question.

8. The problem of the relative historical value of ancient written sources cannot be disregarded. It might be argued that the proposed revision rests on the assumed historical reliability of Scripture, an assumption that cannot be proved. However, this holds even more firmly for the popular evaluation of Scripture which is assumed by the Higher Criticism and which is accepted without question as a premise for archaeological interpretation. Hence in both cases, the problem reverts to one of basic philosophy,[9] and one approach cannot be considered less reasonable than the other, except as one approach leads to a notably less consistent structure otherwise. The writer has freely admitted that to propose an alternate structure that is no more consistent that the traditional views, but differing only in a different starting philosophical premise, would not constitute a worthy contribution to the problems of archaeology.[10]

On the other hand, it is to be noted carefully that it is not alone the problems related to Scripture that are provided solutions by the proposed revision. Numerous problems are clarified that have no relation to the evaluation of Scripture *per se*. It is also to be noted that while it may not be possible to prove that Scripture is altogether dependable history, it has been demonstrated clearly that the methods used by the Higher Criticism are *not valid* and that the deductions based on these methods do not have any necessary significance.[11]

In Conclusion

This altered interpretation of archaeology as applied to the chronology of the ancient world is offered with an expectancy that its reception by scholars generally will be notably short of enthusiastic. This could be deduced, if for no other reason, from the similar reception that has been given to previous proposals that have required a major shift in the current thinking. In spite of this situation, it is also offered with the belief that among this large group, there will be some who will recognize the potential advantages of the general outlines of the proposed revision and the validity of the evidences produced to support it. There is a further hope that among these few there will be some who have the courage to express such an opinion.

The altered interpretation is offered also to that large group of individuals who have maintained the belief that Scripture is what it claims to be. Perhaps most of these are quite unaware of the difficulties involved in maintaining a defensible position within the framework of popular opinion. But sooner or later, the problem must be faced by the Christian world as a whole, and it is far better to have the answers in advance. There may be many others who once had a firm confidence in Scripture but who have lost that faith under the pressure of popular sicentific opinion. To these, this thesis is offered with a hope that such a faith may be restored. To the Jewish people, the thesis is offered in refutation of the archaeological interpretation which tends to make the ancient Hebrews a cultural nonentity which made no significant contribution to ancient cultural development. The modern Jews are the descendants of an ancient people who were the elite of their era, as evidenced by their literature, their moral code, their understanding of health principals, and their authorship of invaluable cultural innovations.

It is recognized that there are many who have at least a cursory knowledge of the difficulties involved in attempting to defend their faith in the face of the situation that results from the acceptance of popular interpretations of archaeological evidence. There are many who are attempting to maintain a confidence in Scripture by taking shelter under the often stated claim that it is not necessary for Scripture to be historically reliable for its religious message to be retained. This concept is totally fallacious. If these writings are not reliable historically, they have no more genuine religious import than does the Koran, or the writings of Hinduism, or Confucianism. The religious message of Scripture is inseparable from its historical reliability. The relative impotency of modern Christiantiy as practiced by many may be traced directly to a premature compromise of theology with scientific opinion.

THE END

Notes and References

(1) See Chaps. III and IV. (2) See Chap. V., Sect. IX. (3) Vol. I, Chap. V, VI. (4) Vol. I, Chap. XIV; this volume, Chap. V, Sect. IX. (5) *Ibid.*, Chaps. XVI, XVII. (6) *Ibid.*, Chap. II. (7) *Ibid.*, Chap. XVI. (8) See ref. 3; Chap. V, Sect. IX. (9) *Ibid.*, Chap. XIX. (10) *Ibid.*, Chap. VI, Sect. II. (11) The assumed validity of the methods of the Higher Criticism was put to a test in a court trial in a case of claimed plagiarism. The reports of the developments in the case were published in the *Sunday School Times* of January 21 and 28, 1933 and reviewed by G. M. Price in his work *Modern Discoveries Which Help Us Believe*.

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ABBREVIATIONS USED IN THE INDEX

EB., MB., and LB. refer to Early, Middle and Late Bronze respectively. D- is followed by a Roman number and is read Dynasty. Ds. is then Dynasties. R- is followed by a Roman number and is read Rameses. AA. is the abbreviation for Archaeological Ages. Other abbreviations used only in a specific entry are noted in the entry titles.

AI PROBLEM
Expected basis as a synchronism with the Conquest, I:18. Difficulties in the archaeology of, I:71f. Dating of too early for such synchronism, I:18, 45, 91; II:93. The problem of identity of the site now settled, I:71f.; II:93. Only remaining interpretation possible is contradictory to Scripture, I:72:II:93.

AMALEKITES (A)
Area of occupation, I:230. Identification as the Hyksos, I:300f. Saul's war with the A. correlated with the expulsion of the Hyksos, I:232,304. See also under HYKSOS.

AMARNA LETTERS
Dated in the time of Amenhotep IV, I:277. Basis for current dating in the 14th century, II:314. Revised dating of Amenhotep IV, I:274, Fig. 11. Evidence against the current dating, II:93, 314ff. Evidence for dating in the 9th century, II:314ff. Letters do not indicate a conquest, II:322f. Misidentification of Assyrian and Kassite names in, II:314f. Confirmation of the later date from Phoenician chronology, II:320. See also under ʿAPIRU-HEBREW PROBLEM.

ANACHRONISMS (A), ANOMALIES, AND ENIGMAS RELATED TO THE CHRONOLOGIES OF ASSYRIA AND CHALDEA
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IDENTIFICATIONS

Abbreviations used in this entry: (mostly new by the revision) — AL. Amarna Letters; HP. Harris papyrus; SL. Sothis list; ThL. Theban list; Her. Herodotus; TL. Turin List; S. Scripture; M. Manetho; Mon. Monuments; Jos. Josephus; SaL. Sakkarah list. (See under INSCRIPTIONS for references to these sources).

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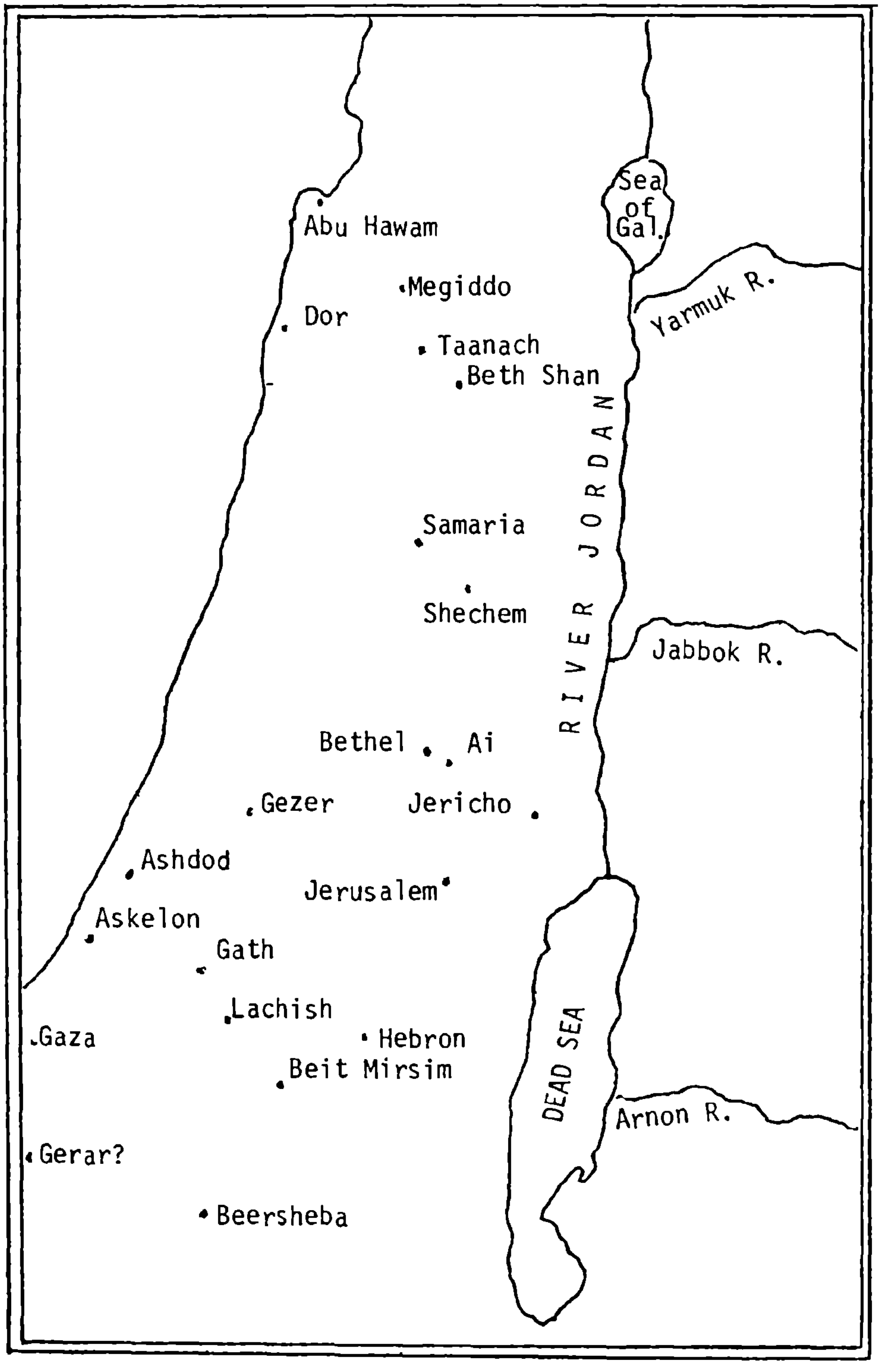
PALESTINE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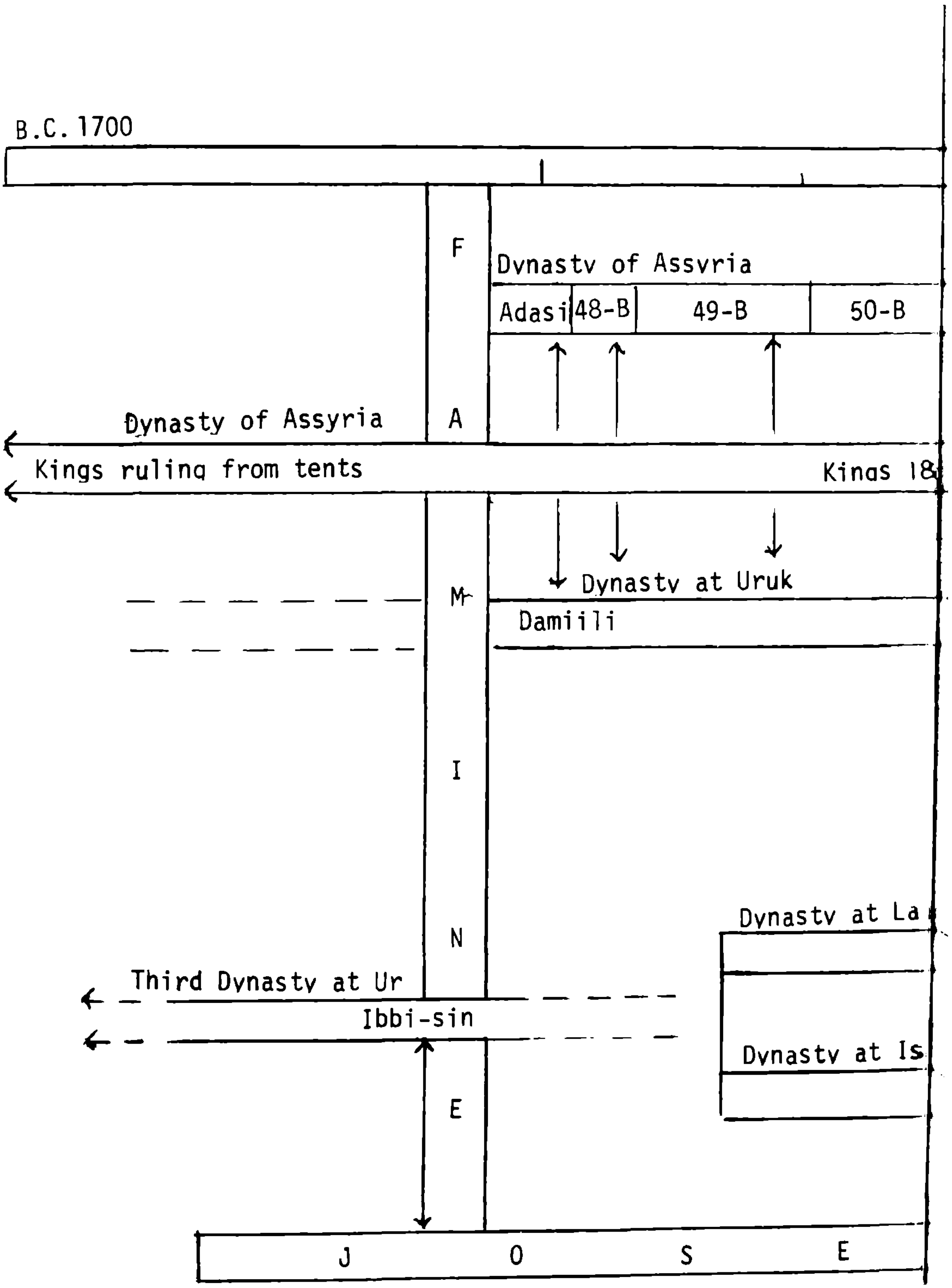
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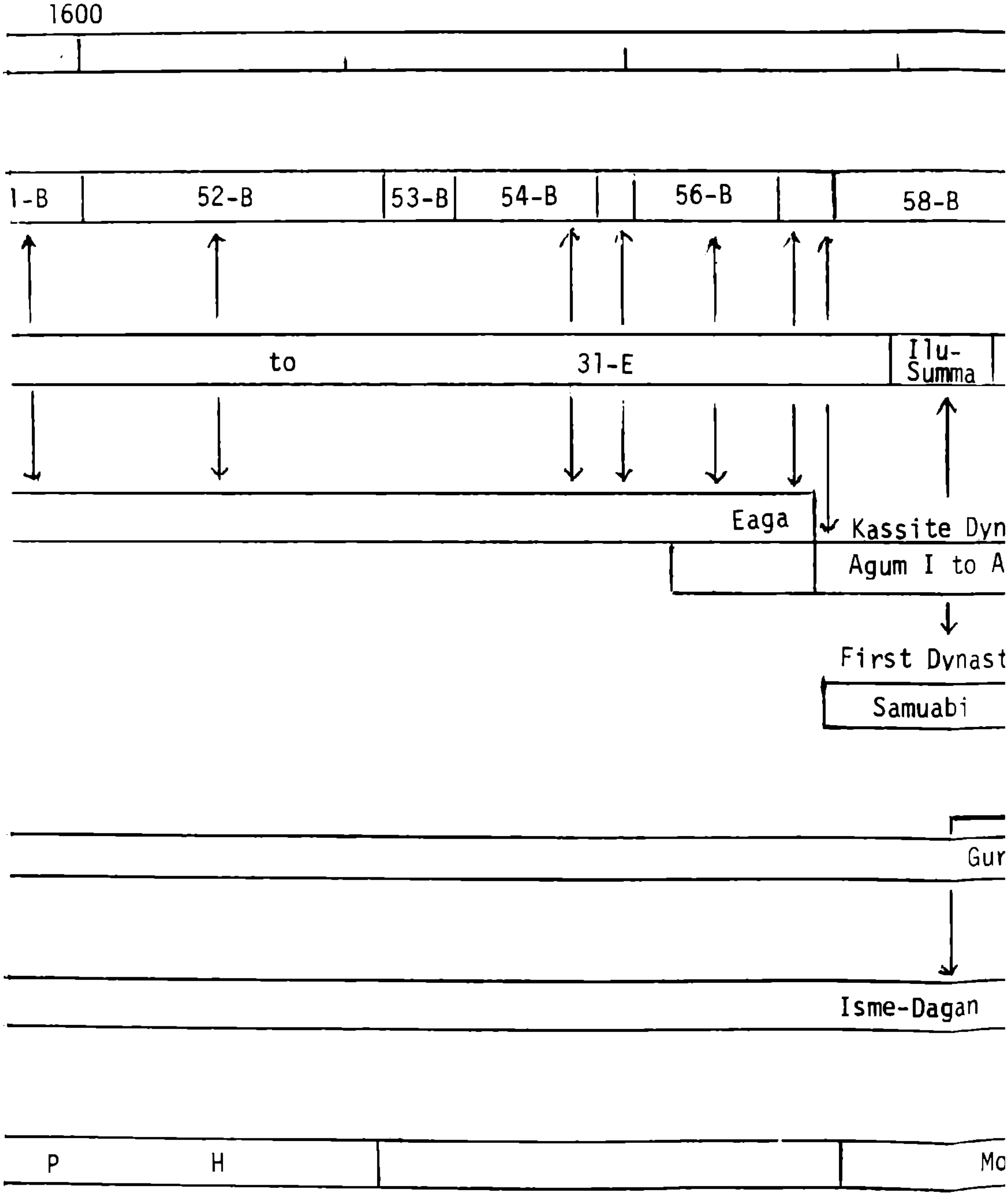
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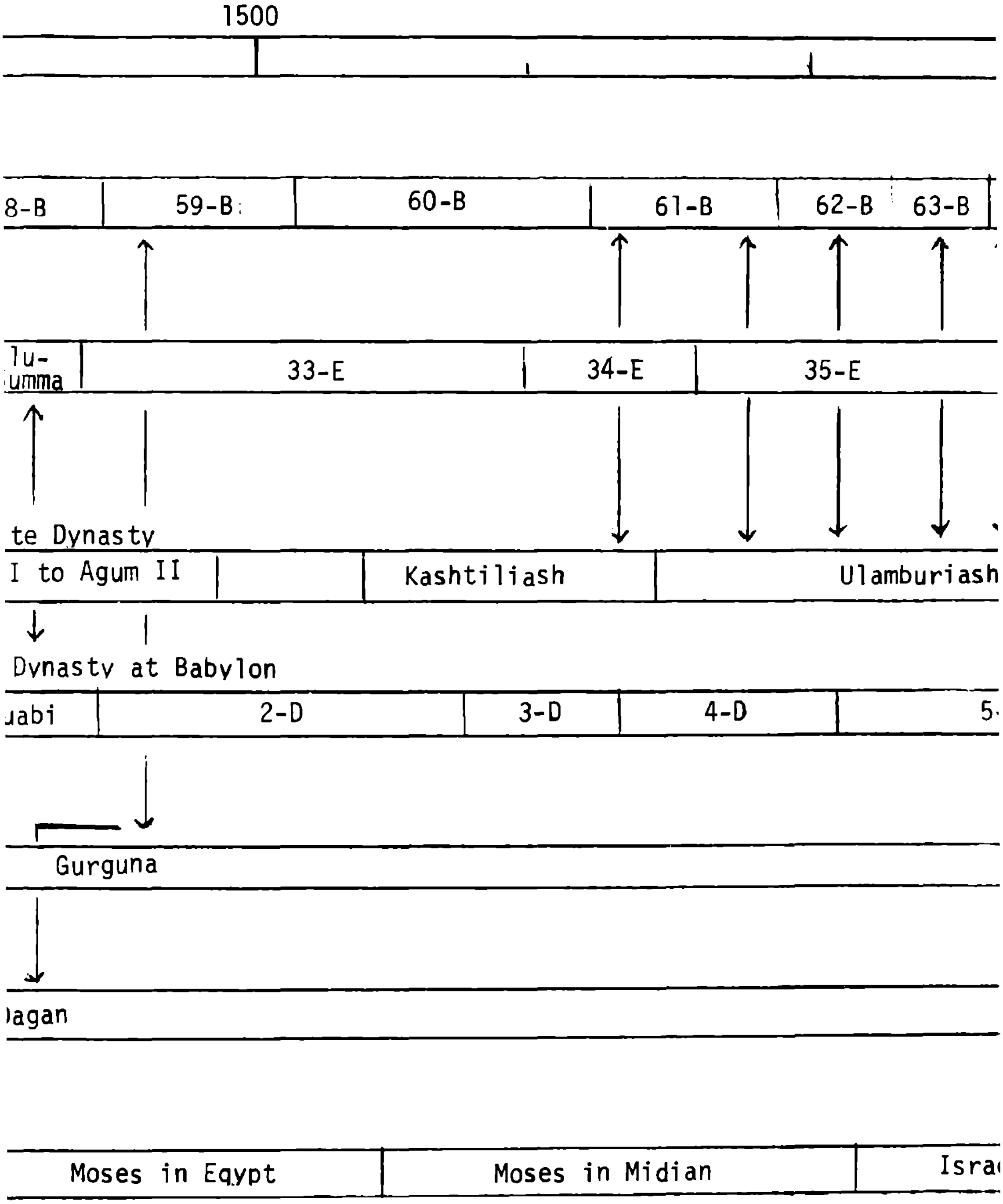
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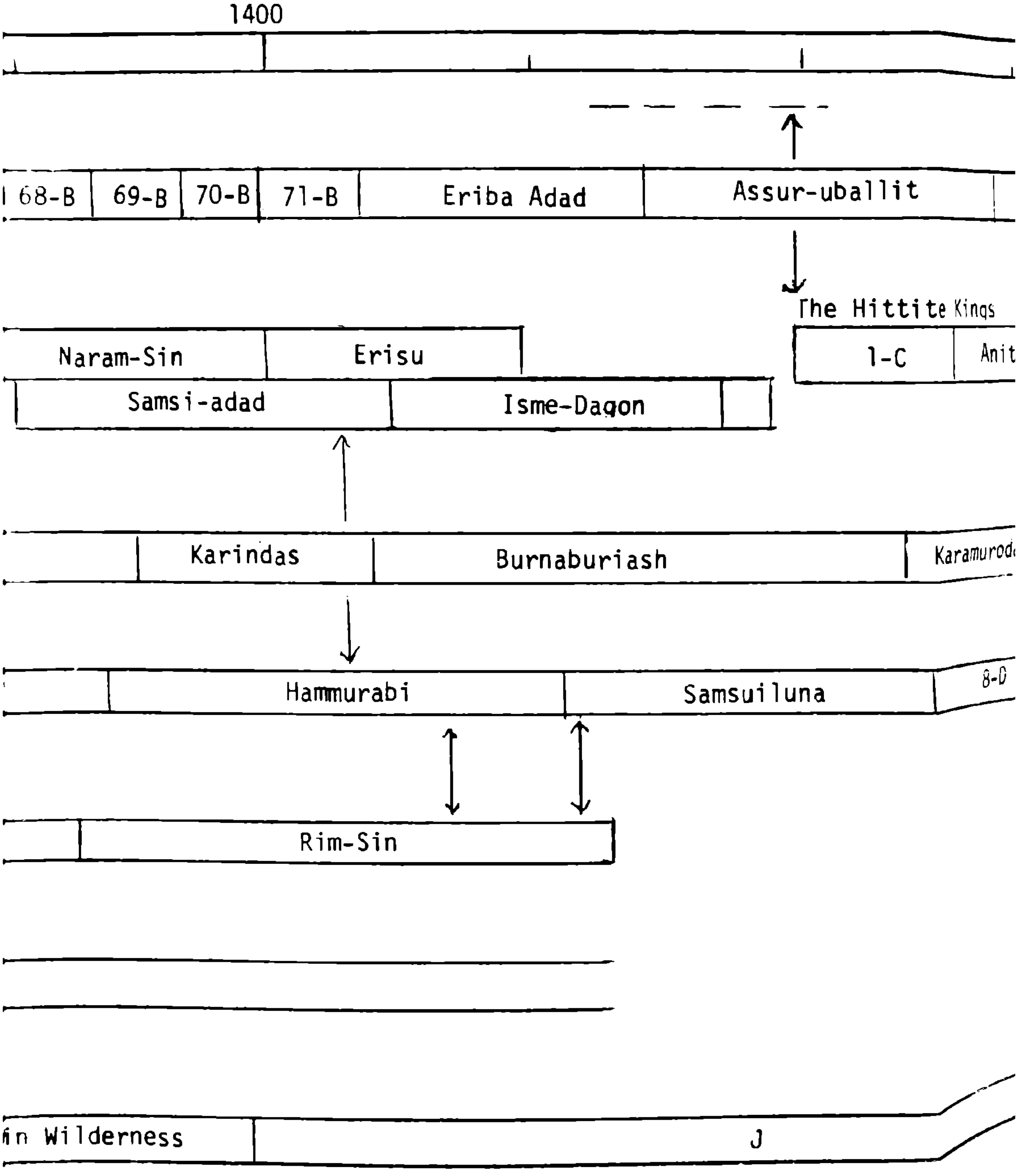
Figure 5

The Approximate Chronology of the Kings of Mesopotamia and the Hittites in Terms of the Proposed Revision



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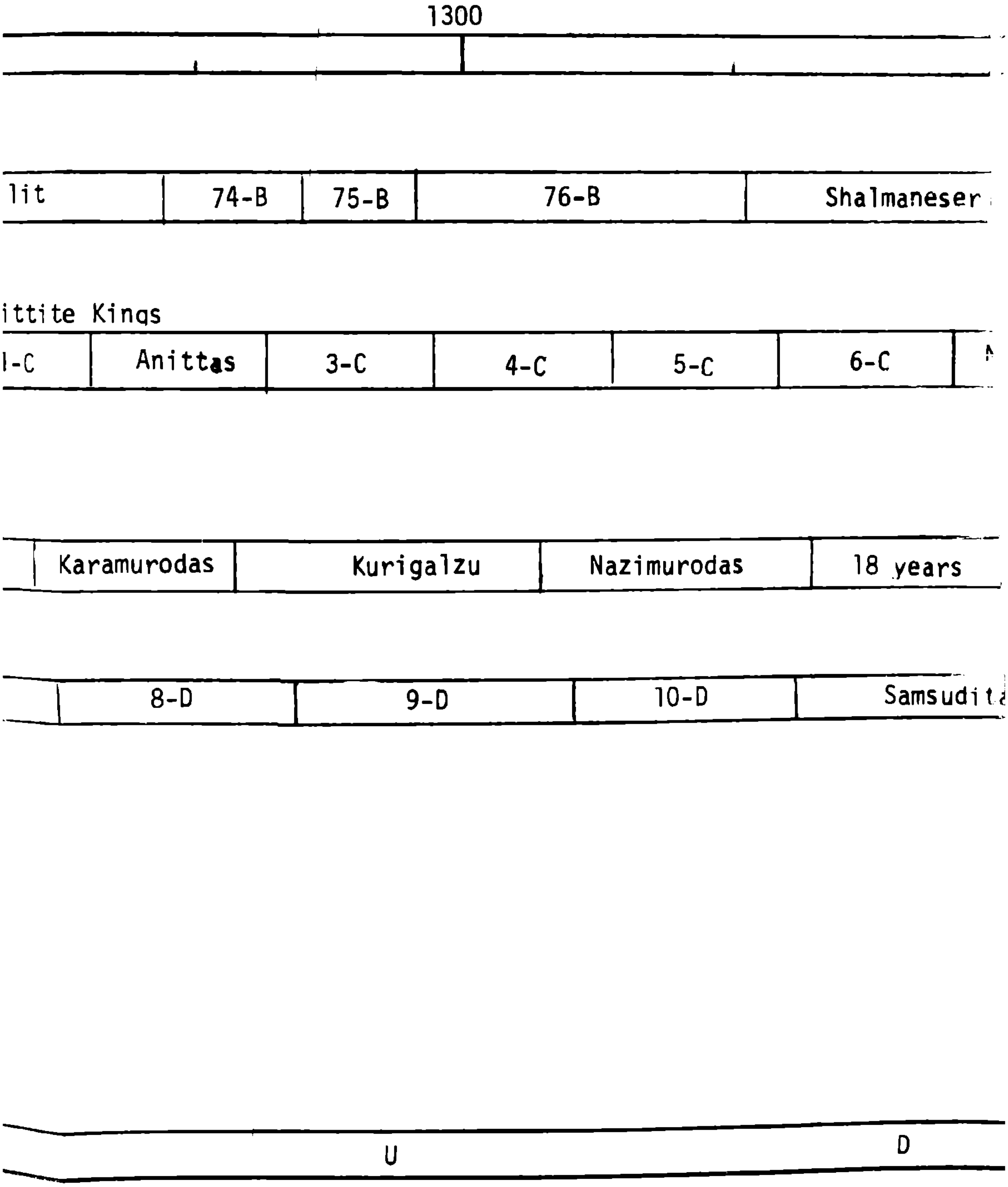

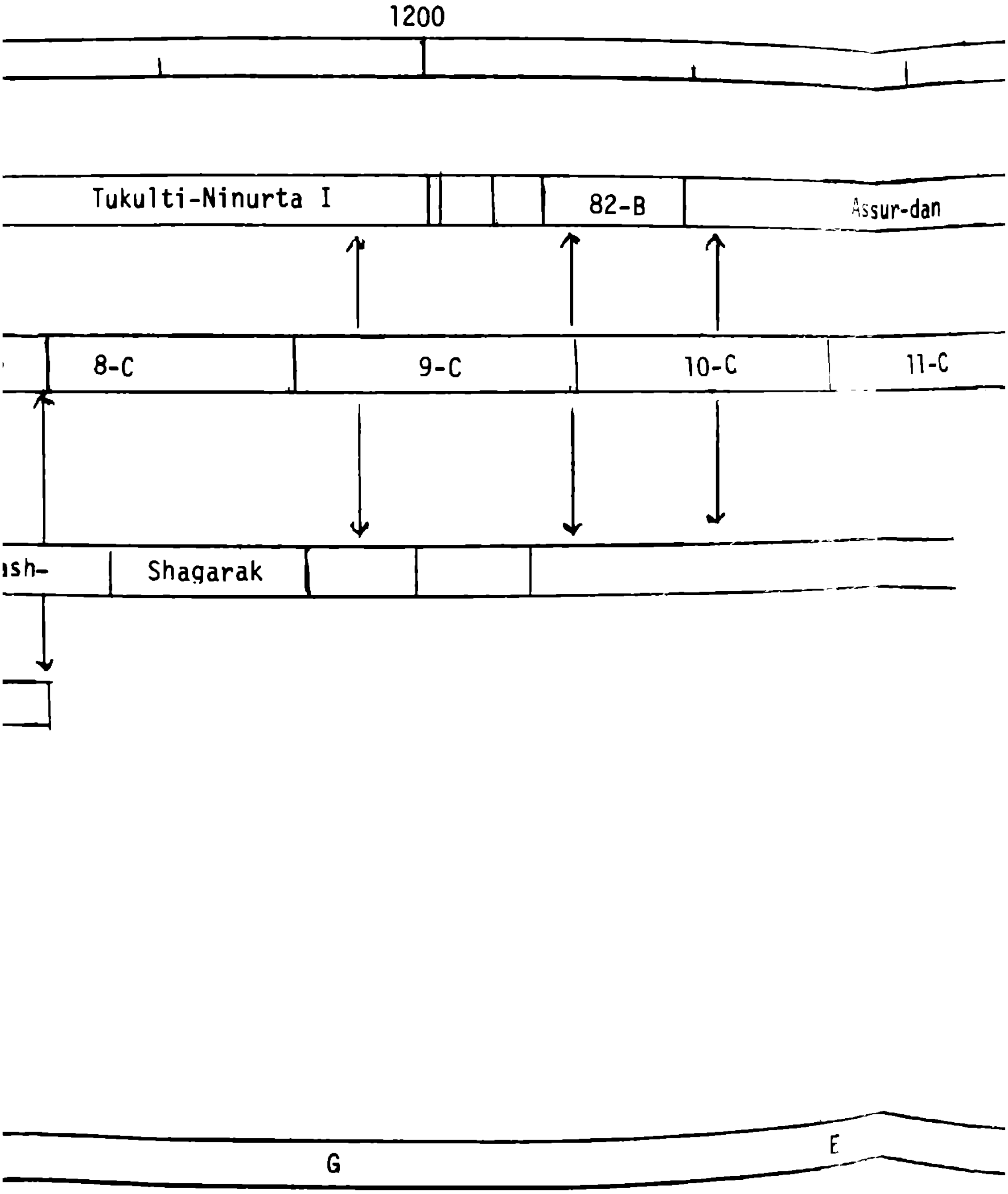
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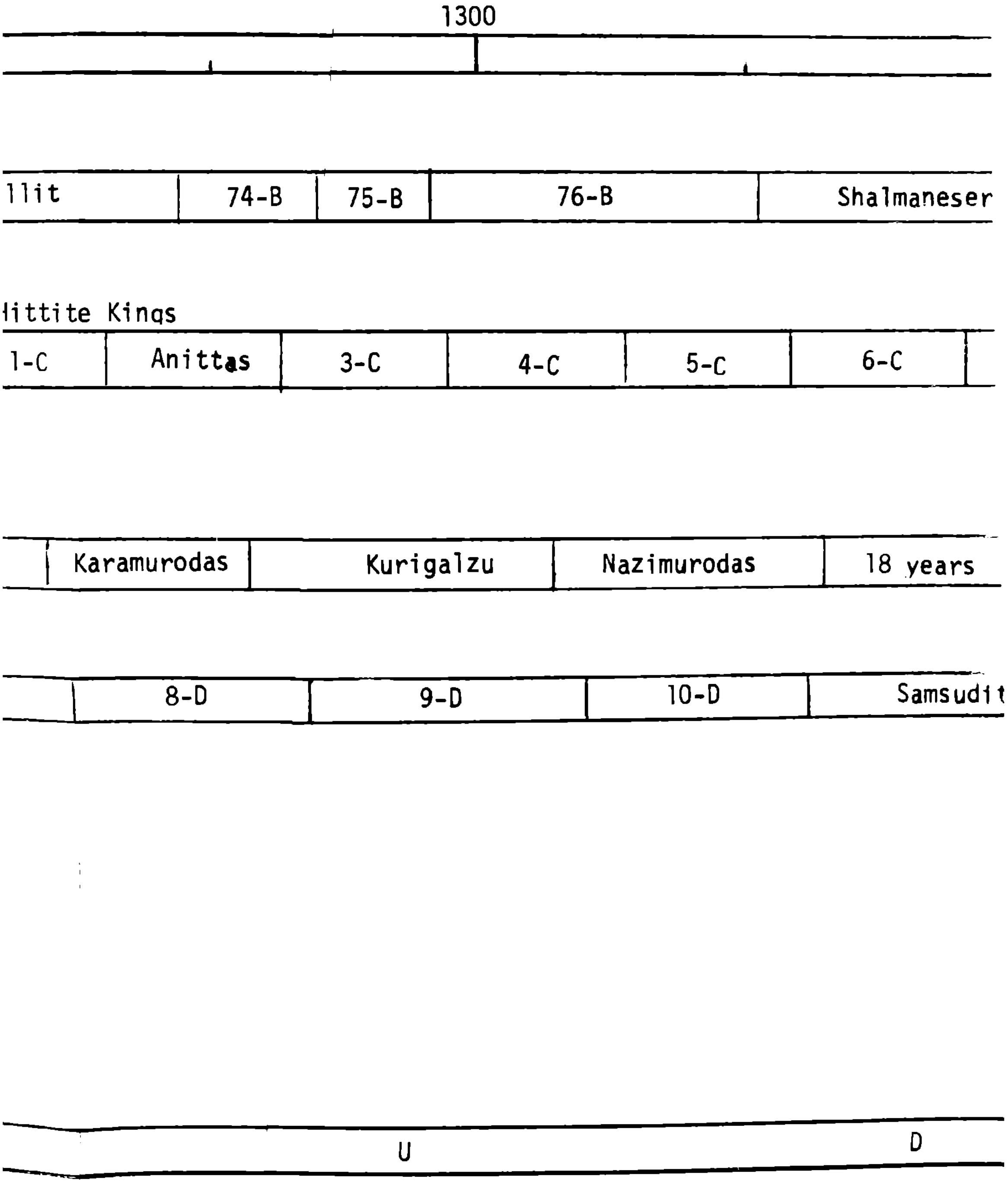

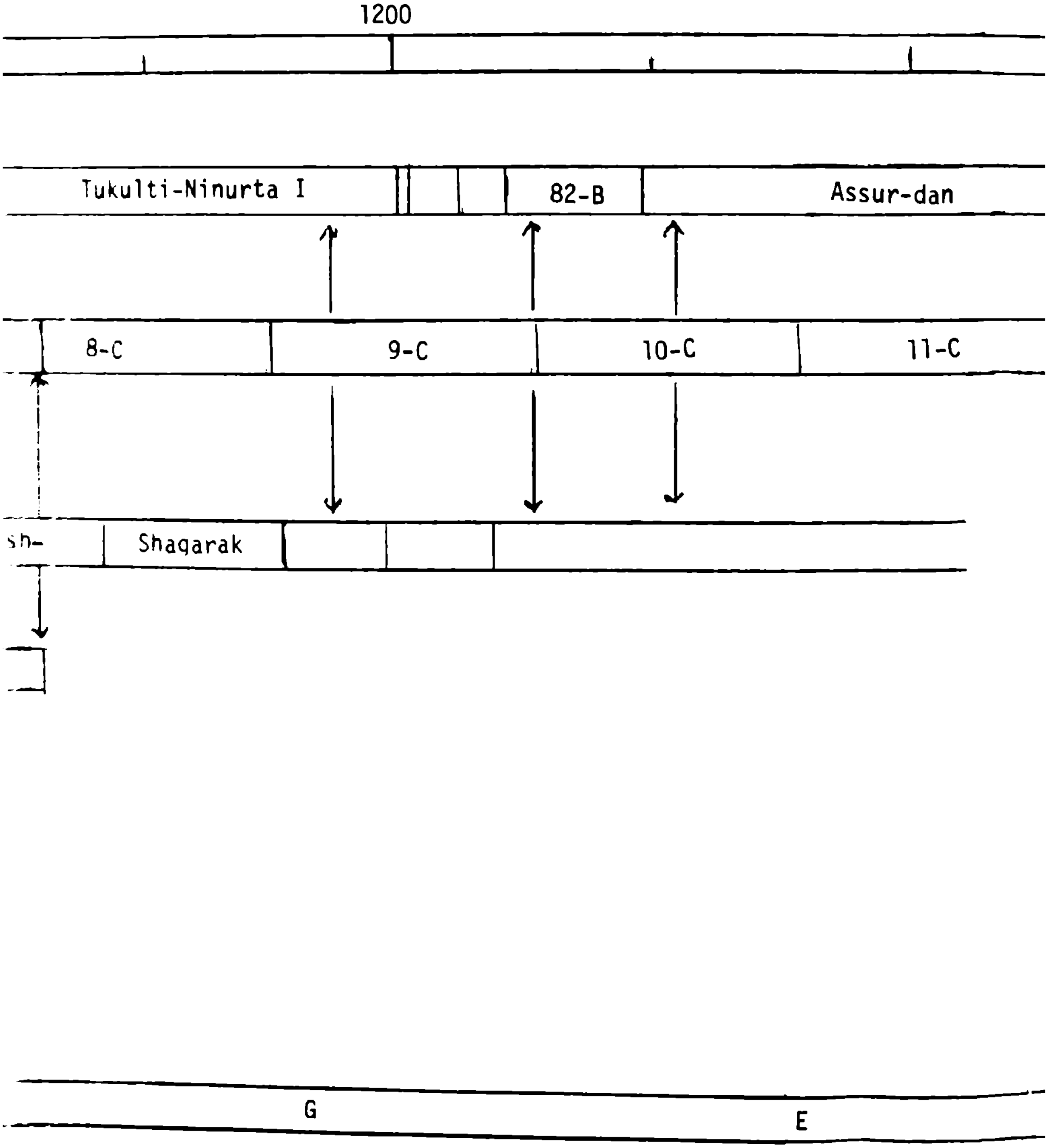
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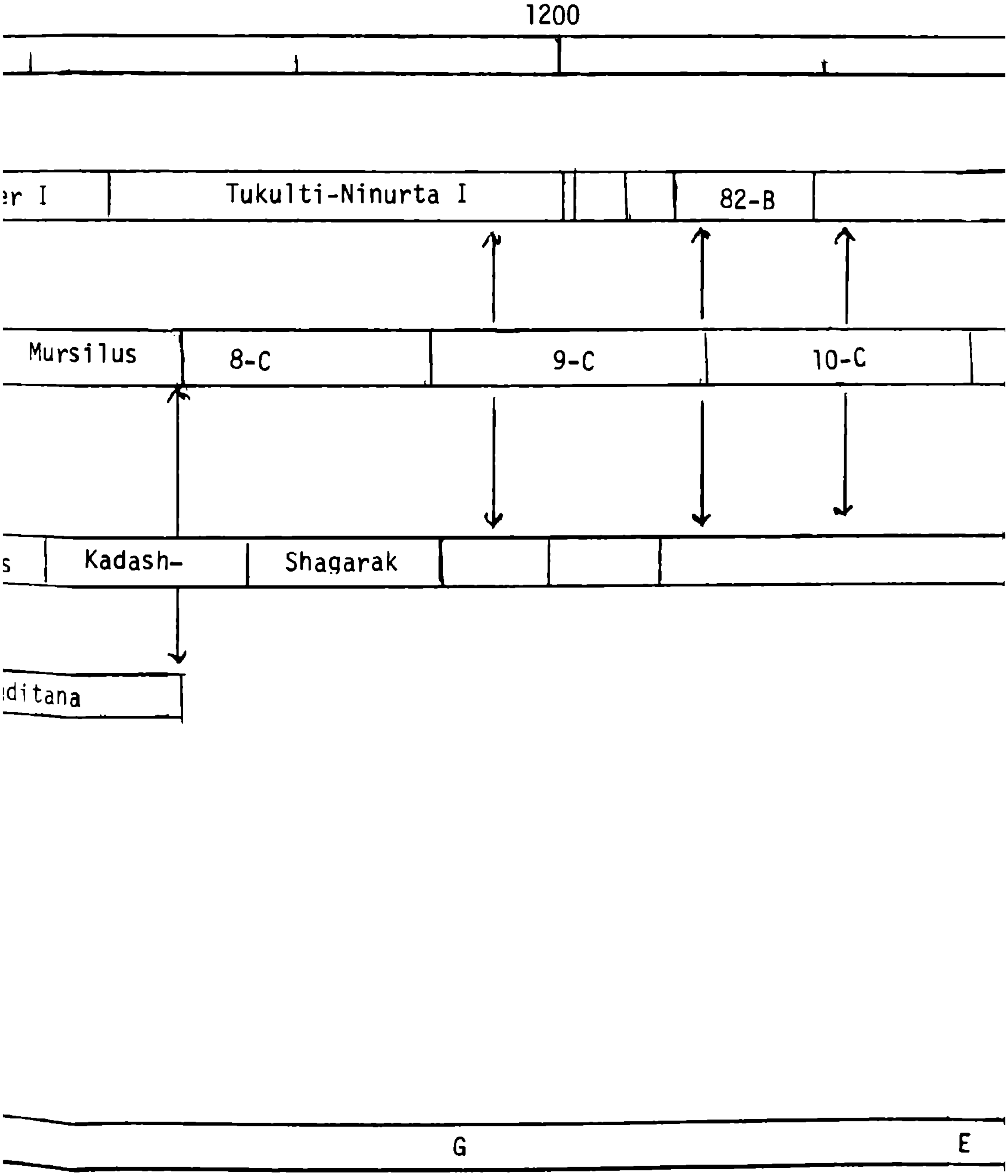
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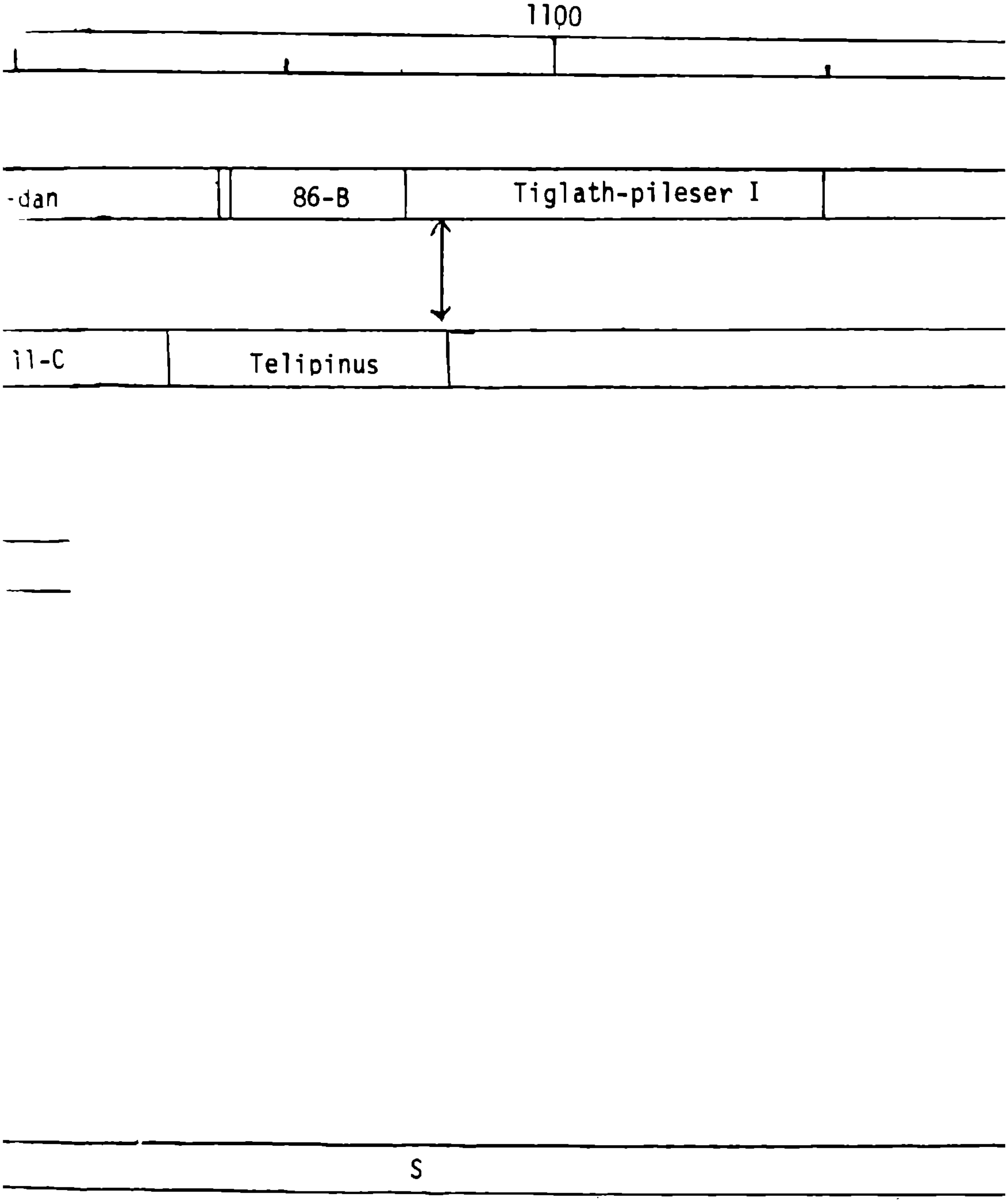
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